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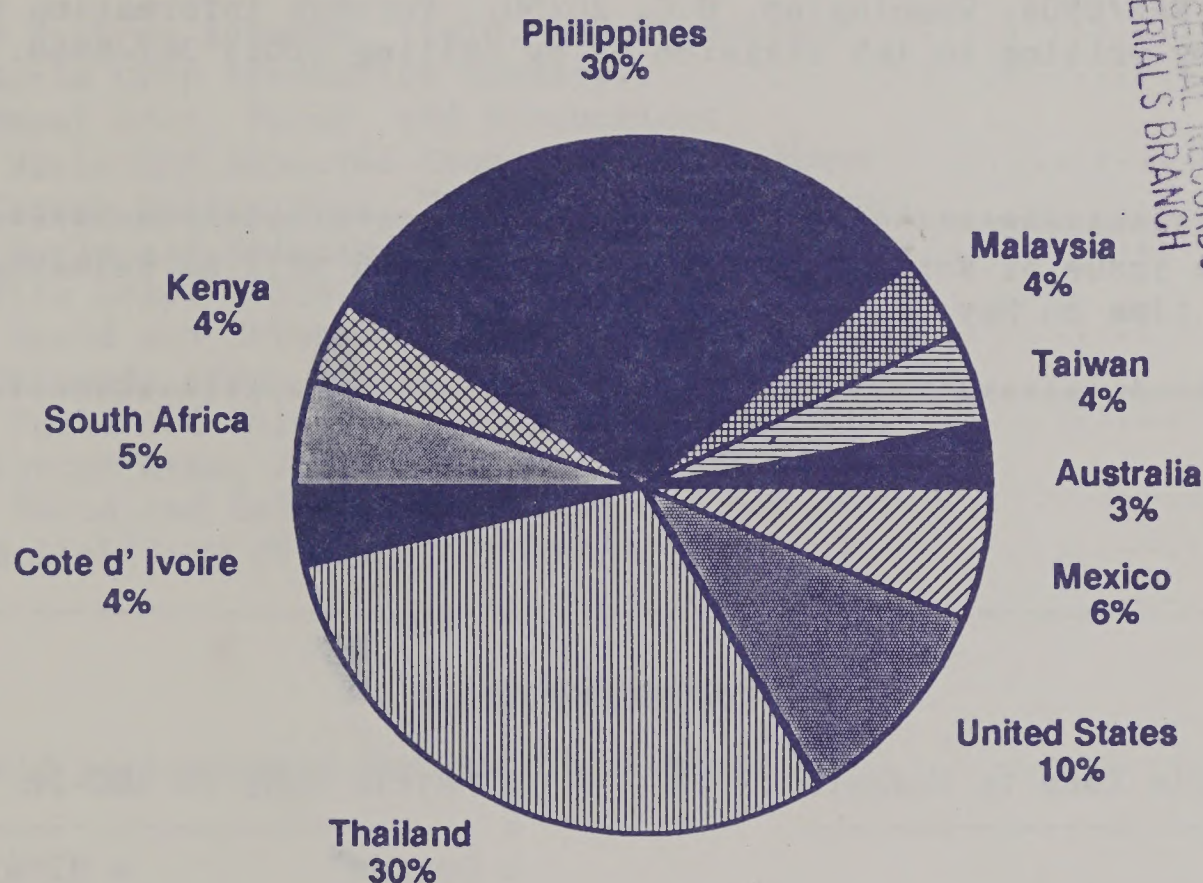
WAP 4 - 90

APRIL 1990

# World Agricultural Production

## World Pineapple Production

1990



### Inside This Issue.....

World Pineapple Production

Winter Grain Prospects in the  
Northern Hemisphere

Commercial Beef Production in Thailand

German Unification and Agriculture

Agricultural Impacts of Brazilian  
Economic Reforms



This report draws on information from USDA's global network of agricultural attaches and counselors, official statistics of foreign governments, other foreign source materials, and results of office analysis. Estimates of U.S. acreage, yield, and production are from USDA's Agricultural Statistics Board, except where noted. All numbers in this report are based on unrounded data and detail may not add to totals because of rounding. This report reflects official USDA estimates for grains, oilseeds, and cotton released in World Agricultural Supply and Demand Estimates (WASDE-241), April 10, 1990.

This report was prepared by the Production Estimates and Crop Assessment Division, FAS/USDA, Washington, D.C. 20250. Further information may be obtained by writing to the division or by calling (202) 382-8888.

\*\*\*\*\*  
 \* The next issue of World Agricultural Production will be released at 3 p.m. \*  
 \* eastern time on May 11, 1990. \*  
 \* \*  
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:			:
:	CONVERSION TABLE		:
:			:
:			:
:	Metric Tons to Bushels	:	Metric Tons to 480-lb. Bales
:	-----	:	-----
:		:	Cotton = MT*4.592917
:	Wheat & Soybeans = MT*36.7437	:	
:	Corn, Sorghum, Rye = MT*39.36825	:	
:	Barley = MT*45.929625	:	
:	Oats = MT*68.894438	:	Metric Tons to Hundredweight
:	-----	:	-----
:	1 hectare = 2.471044 acres	:	Rice = MT*22.04622
:	1 kilogram = 2.204622 pounds	:	
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## PRODUCTION HIGHLIGHTS FOR 1989/90

**WHEAT:** World production for 1989/90 is estimated at a record 534.9 million metric tons, down 0.3 million or less than 1 percent from last month but up 7 percent from last year's harvest. Important changes from last month include the following:

- o EC-12                      Production is estimated at 78.6 million tons, down 0.3 million or less than 1 percent from last month but up 5 percent from last year. A lower yield is estimated for Denmark.
- o Turkey                     Production is estimated at 11.5 million tons, down 0.5 million or 4 percent from last month and down 23 percent from last year. This change is due to a lower estimated yield.

**COARSE GRAINS:** World production for 1989/90 is estimated at 797.9 million tons, down 0.3 million or less than 1 percent from last month but up 10 percent from last year. Important changes from last month include the following:

- o South Africa            Production is estimated at 8.8 million tons, up 0.5 million or 6 percent from last month but down 32 percent from last year. The increase reflects a higher estimated yield for the corn crop.
- o Australia                Production is estimated at 6.8 million tons, down 0.3 million or 5 percent from last month but up 2 percent from last year. The decrease is attributed to a decline in estimated sorghum area and yield owing to extreme drought in central Queensland.
- o Mexico                    Production is estimated at 14.3 million tons, down 0.2 million or 1 percent from last month but up 4 percent from last year. Sorghum and corn estimates were lowered due to a reduction in estimated harvested area. Frost in the northeast growing regions and low reservoir levels in the irrigated regions contributed to the area reduction.
- o New Zealand            Production is estimated at 0.5 million tons, down 0.2 million or 27 percent from last month and down 14 percent from last year. The decline reflects lower estimated area and yields for all coarse grains due to severe drought.



**RICE (MILLED-BASIS):** World production for 1989/90 is estimated at a record 340.0 million tons, down 0.2 million or less than 1 percent from last month but up 3 percent from the 1988/89 crop. Foreign production in 1989/90 is projected at a record 335.0 million tons. Important changes from last month include the following:

o **Brazil**

Production is estimated at 6.3 million tons, down 0.1 million or 2 percent from last month and down 16 percent from last year. Lower estimated harvested area was the major factor in the reduction. Untimely rains and credit difficulties contributed to the area reduction.

**OILSEEDS:** Total world oilseeds production for 1989/90 is pegged at a record 213.3 million tons. This month's forecast is down 0.2 million tons from last month, but up by 10.8 million or 5 percent from last year's output. U.S. production is estimated at 59.4 million tons, down slightly from last month but up 18 percent from last year. Foreign production is forecast to be a record 153.9 million tons, down 0.2 million tons from last month but up 1.7 million or 1 percent from last year.

- \* **Soybeans:** World production for 1989/90 is estimated at a record 107.1 million tons, down 0.1 million from last month but up 12.0 million or 13 percent from last year. Significant changes from last month include the following:

o **Brazil**

Production is estimated at 20.0 million tons, down 0.5 million or 2 percent from last month and down 13 percent from last year. The reduction is based on lower estimated yields which are a result of dry weather in several major growing regions (especially in the state of Parana).

o **Paraguay**

Production is estimated at 1.8 million tons, up 0.4 million or 29 percent from last month and up 12 percent from last year. The increase is based on government and industry data which indicate soybean area expanding to an estimated 0.9 million hectares.

- \* **Cottonseed:** World production for 1989/90 is forecast at 31.1 million tons, down slightly from last month and down 1.1 million or 3 percent from last year.
- \* **Peanuts:** World production for 1989/90 is forecast at 22.1 million tons, down slightly from last month and down 1.3 million or 6 percent from last year's record crop.



- \* Sunflowerseed: World production for 1989/90 is forecast at a record 21.7 million tons, down 0.1 million or 1 percent from last month but up 1.4 million or 7 percent from last year. Significant changes from last month include:
  - o Argentina Production is estimated at 3.9 million tons, down 0.1 million or 3 percent from last month but up 26 percent from last year. The reduction is based on decreased yields due to hot, dry weather, particularly in the principal growing regions in the North.
- \* Rapeseed: World production for 1989/90, estimated at 21.6 million tons, is the third largest on record. The estimate is up slightly from last month but down 1.0 million or 4 percent from last year. Important changes from last month include:
  - o Poland Production is estimated at 1.6 million tons, up 0.1 million or 7 percent from last month. Production is adjusted upward due to revised harvested area and yield estimates.
- \* Flaxseed: World production for 1989/90 is estimated at 1.9 million tons, unchanged from last month but up 0.3 million or 19 percent from last year.
- \* Copra: World production for 1989/90 is estimated at 4.6 million tons, down slightly from last month but up 0.1 million or 3 percent from last year.
- \* Palm Kernels: World production for 1989/90 is forecast at a record 3.2 million tons, up 2 percent from last month and up 0.3 million or 10 percent from last year. A significant change from last month is:
  - o Malaysia Production is estimated at 1.8 million tons, up 70,000 tons or 4 percent from last month. Production is forecast to climb as a result of additional harvested area.
- \* Palm Oil: World production for 1989/90 is forecast at a record 10.4 million tons, up 0.2 million or 2 percent from last month and up 1.0 million or 10 percent from last year. A significant change from last month is:
  - o Malaysia Production is estimated at 6.15 million tons, up 0.25 million or 4 percent from last month and up 9 percent from last year. Favorable yields during the October-December period along with a rise in bearing trees account for the larger than normal production gain.



COTTON: World cotton production in 1989/90 is estimated at 79.8 million bales, down 0.3 million from last month and down 4.7 million bales or 6 percent from last year. Foreign production is estimated at 67.6 million bales, down 0.2 million from last month and 2.0 percent below the 1988/89 estimate. U.S. production is estimated at 12.2 million bales, down slightly from last month. Important changes from a month ago include the following:

o Australia

Production is estimated at a record 1.4 million bales, down 0.1 million or 7 percent from last month but up 7 percent from last year. Hail storms in New South Wales and low irrigation water allocations in Gwydir--one of the major cotton growing areas--are blamed for lower yield prospects. The harvest is about half complete at this time.

o Brazil

Production is estimated at 3.2 million bales, down 0.3 million or 9 percent from last month and down 5 percent from last year. Decreased yields contributed to the reduction from last month. Excessive rains in the important growing regions of the Center South, as well as boll weevil infestations in the northeastern region contributed to the lower yield estimate.

o Paraguay

Production is estimated at a record 1.2 million bales, up 0.1 million or 9 percent from last month and up 30 percent from last year. Favorable weather during the growing season and plentiful labor for the harvest, now well underway, are resulting in record yields.

o Egypt

Production is estimated at 1.3 million bales, up 0.2 million or 13 percent from last month but down 7 percent from last year. The increase is based on higher area and yield than projected last month.



TABLE 1

## U.S. Crop Acreage, Yield, and Production 1/

COMMODITY	PLANTED AREA			HARVESTED AREA			YIELD			PRODUCTION		
	1987/88	1988/89	Proj. 1989/90	1987/88	1988/89	Proj. 1989/90	1987/88	Prel. 1988/89	1989/90 Proj. Mar. Apr.	1987/88	Prel. 1988/89	1989/90 Proj. Mar. Apr.
All Wheat Winter Other Rye	--Million Acres--			--Million Acres--			--Bushels per Acre--			--Million Bushels--		
	65.8	65.5	76.6	55.9	53.2	62.1	37.7	34.1	32.8	2,108	1,812	2,036
	48.8	48.8	55.1	39.3	39.8	41.5	39.8	39.2	35.1	1,565	1,562	1,454
	17.0	16.7	21.5	16.6	13.4	20.7	32.6	18.7	28.1	542	250	582
	2.5	2.4	2.0	0.7	0.6	0.5	29.1	24.7	28.1	20	15	13
Soybeans	58.2	58.8	60.7	57.2	57.4	59.4	33.9	27.0	32.4	1,938	1,549	1,927
Corn Sorghum Barley Oats	66.2	67.7	72.3	59.5	58.3	64.8	119.8	84.6	116.2	7,131	4,929	7,527
	11.8	10.3	12.6	10.5	9.0	11.2	69.4	63.8	55.4	731	577	618
	10.9	9.8	9.2	10.0	7.6	8.3	52.4	38.0	48.6	521	290	403
	17.9	13.9	12.1	6.9	5.5	6.9	54.3	39.3	54.4	374	218	374
Rice	--Pounds per Acre--			--Pounds per Acre--			--Pounds per Acre--			---Million CWT.---		
	2.4	2.9	2.7	2.3	2.9	2.7	5,555	5,514	5,749	129.6	159.9	154.5
All Cotton	10.4	12.5	10.6	10.0	11.9	9.5	706	619	619	14.8	15.4	12.2

1/ Estimates from USDA Agricultural Statistics Board.

April 1990

Production Estimates and Crop Assessment Division, FAS, USDA



TABLE 2

## World Crop Production Summary

Commodity	World	Total Foreign	North America			Europe			USSR			Asia				South America		Selected Other			All Other Countries
			United States	Canada	Mexico	EC-12	Oth. W. Europe	Eastern Europe	China	India	Indonesia	Paki- stan	Thai- land	Argen- tina	Brazil	Aue- tralia	South Africa	Turkey			
—Million Metric Tons—																					
Wheat 1987/88 1988/89 prel. 1989/90 proj. March April	501.7 500.9	444.4 451.5	57.4 49.3	26.0 16.0	3.7 3.2	71.4 74.7	4.0 3.9	39.9 44.8	83.3 84.4	85.8 85.4	44.3 46.2	0.0 0.0	12.0 12.7	0.0 0.0	8.8 8.4	6.1 5.8	12.4 14.1	3.1 3.5	13.0 15.0	16.1 17.9	
	535.2 534.9	479.8 479.5	55.4 55.4	24.4 24.4	3.9 3.9	78.8 78.6	4.3 4.3	42.3 42.3	90.5 90.5	91.0 91.0	54.0 54.0	0.0 0.0	14.4 14.4	0.0 0.0	10.2 10.2	5.5 5.5	14.2 14.2	2.0 2.2	12.0 11.5	15.9 16.0	
	792.1 728.6	575.1 578.9	217.0 149.7	25.5 19.7	14.5 13.8	82.4 88.1	10.8 11.3	62.8 59.5	113.7 97.5	95.8 94.3	23.8 31.7	4.8 5.2	2.2 2.4	2.9 4.5	13.1 7.3	25.5 26.7	7.2 6.7	7.9 13.0	9.2 10.0	73.0 87.3	
	798.2 797.9	576.7 576.4	221.4 221.4	23.5 23.5	14.5 14.3	81.5 81.5	12.3 12.4	66.5 66.5	107.0 107.0	91.3 91.3	31.2 31.2	4.8 4.8	2.6 2.7	4.3 4.3	8.6 8.6	25.3 25.3	7.1 6.8	8.3 8.8	7.6 7.4	80.3 80.0	
Rice (Milled) 1987/88 1988/89 1989/90 March April	313.7 330.2	309.6 324.9	4.1 5.2	0.0 0.0	0.4 0.3	1.3 1.3	0.0 0.0	0.2 0.2	1.7 1.9	121.7 118.4	56.9 70.7	27.0 27.5	3.2 3.2	11.9 13.9	0.2 0.3	8.0 7.5	0.5 0.6	0.0 0.0	0.2 0.2	22.4 22.9	
	340.2 340.0	335.3 335.0	4.9 4.9	0.0 0.0	0.4 0.4	1.3 1.3	0.0 0.0	0.2 0.2	1.8 1.8	125.3 125.3	70.0 70.0	28.8 28.8	3.2 3.2	13.9 13.9	0.3 0.3	6.4 6.3	0.6 0.7	0.0 0.0	0.2 0.2	23.1 23.0	
	1,607.6 1,559.7	1,329.1 1,355.4	278.5 204.2	51.5 35.7	18.6 17.2	155.1 164.1	14.8 15.2	102.9 104.5	198.7 183.8	303.4 298.1	124.9 148.6	31.8 32.7	17.5 18.3	14.9 18.4	22.1 16.0	39.6 40.0	20.1 21.3	11.0 16.6	22.3 25.2	179.8 199.9	
	1,673.6 1,672.8	1,391.8 1,391.0	281.8 281.8	47.8 47.8	18.7 18.6	161.6 161.4	16.6 16.7	109.1 109.1	199.3 199.3	307.6 307.6	155.2 155.2	33.6 33.6	20.2 20.3	18.1 18.1	19.1 19.1	37.2 37.1	22.0 21.7	10.3 11.0	19.7 19.1	195.6 195.4	
Oilseeds 2/ 1987/88 1988/89 prel. 1989/90 proj. March April	209.5 202.5	148.5 152.2	61.0 50.3	5.9 5.9	1.2 0.9	12.4 11.4	0.5 0.6	5.3 5.1	11.8 12.5	33.7 30.6	14.4 19.1	1.7 2.0	3.2 3.2	0.6 0.7	14.0 10.5	19.7 24.4	0.9 1.7	1.0 0.9	2.0 2.3	20.2 20.5	
	213.6 213.3	154.1 153.9	59.4 59.4	4.9 4.9	1.3 1.3	10.6 10.6	0.7 0.7	5.8 5.9	13.5 13.5	29.2 29.2	18.6 18.6	1.9 1.9	3.3 3.3	0.8 0.8	15.7 15.7	22.1 21.5	0.9 0.8	0.9 0.9	2.4 2.3	21.6 22.0	
	—Million 480-Pound Bales—																				
	Cotton 1987/88 1988/89 prel. 1989/90 proj. March April	81.2 84.5	66.4 69.1	14.8 15.4	0.0 0.0	1.0 1.4	1.2 1.6	0.0 0.0	0.1 0.1	11.5 12.6	19.5 19.1	7.4 8.3	0.0 0.0	6.7 6.6	0.1 0.2	1.3 0.9	3.5 3.4	1.3 1.3	0.4 0.3	2.5 3.0	10.0 10.4
	80.1 79.8	67.8 67.6	12.2 12.2	0.0 0.0	0.8 0.8	1.4 1.4	0.0 0.0	0.1 0.1	12.2 12.2	18.0 18.0	9.4 9.4	0.0 0.0	6.7 6.7	0.1 0.1	1.3 1.3	3.5 3.2	1.5 1.4	0.4 0.4	2.7 2.7	9.8 10.0	

1/ Includes total of wheat, coarse grains, and rice (milled) shown above. Estimates of Soviet total grain production, including wheat, coarse grains, rice (rough), minor grains and pulses are 211.4 million tons in 1987/88, 195.1 million in 1988/89, and 200.0 million forecast in 1989/90.

2/ Totals for major regions and countries include the six major oilseeds shown elsewhere in this report, while world and total foreign also include copra and palm kernels for all countries.

Note: Entries of 0.0 indicate no reported or insignificant production.



TABLE 3

## Wheat Area, Yield, and Production World and Selected Countries and Regions

COUNTRY/REGION	AREA			YIELD				PRODUCTION			
	Prel. 1987/88	Proj. 1988/89	1989/90	Prel. 1987/88	1989/90 1988/89	Proj. Mar.	Apr.	Prel. 1987/88	1989/90 1988/89	Proj. Mar.	Apr.
	---Million Hectares---			---Metric Tons Per Hectare---				---Million Metric Tons---			
World	219.9	218.0	225.8	2.28	2.30	2.37	2.37	501.7	500.9	535.2	534.9
United States	22.6	21.5	25.2	2.53	2.29	2.20	2.20	57.4	49.3	55.4	55.4
Total Foreign	197.2	196.5	200.6	2.25	2.30	2.39	2.39	444.4	451.5	479.8	479.5
Maj. Foreign Exporters	43.2	42.1	44.2	2.74	2.69	2.88	2.88	118.6	113.1	127.6	127.3
Argentina	4.8	4.7	5.5	1.84	1.79	1.87	1.86	8.8	8.4	10.2	10.2
Australia	9.1	8.9	8.9	1.36	1.58	1.59	1.59	12.4	14.1	14.2	14.2
Canada	13.5	13.0	13.6	1.93	1.23	1.79	1.79	26.0	16.0	24.4	24.4
EC-12	15.9	15.5	16.2	4.50	4.81	4.86	4.84	71.4	74.7	78.8	78.6
Major Importers	95.4	95.9	97.1	2.34	2.39	2.46	2.46	223.6	229.3	238.9	239.1
Brazil	3.5	3.5	3.3	1.76	1.68	1.67	1.67	6.1	5.8	5.5	5.5
China	28.8	28.8	29.8	2.98	2.97	3.05	3.05	85.8	85.4	91.0	91.0
Eastern Europe	10.5	10.7	10.7	3.79	4.17	3.96	3.96	39.9	44.8	42.3	42.3
Egypt	0.6	0.6	0.6	4.23	4.76	4.76	5.05	2.4	2.8	3.0	3.2
Other N. Africa 1/	5.1	4.0	4.9	1.01	1.26	1.13	1.13	5.2	5.0	5.6	5.6
Japan	0.3	0.3	0.3	3.19	3.62	3.47	3.47	0.9	1.0	1.0	1.0
USSR	46.7	48.1	47.5	1.78	1.76	1.91	1.91	83.3	84.4	90.5	90.5
Other Foreign	58.6	58.5	59.3	1.75	1.86	1.92	1.91	102.2	109.1	113.3	113.1
India	23.1	23.1	24.1	1.92	2.00	2.24	2.24	44.3	46.2	54.0	54.0
Iran	6.1	6.3	6.3	0.98	1.08	1.08	1.08	6.0	6.8	6.8	6.8
Mexico	0.9	0.8	1.0	4.11	4.00	4.11	4.11	3.7	3.2	3.9	3.9
Non-EC W. Europe	0.9	0.8	0.9	4.24	5.01	5.03	5.06	4.0	3.9	4.3	4.3
Pakistan	7.7	7.3	7.7	1.56	1.73	1.92	1.87	12.0	12.7	14.4	14.4
South Africa	1.7	2.0	1.8	1.81	1.78	1.09	1.19	3.1	3.5	2.0	2.2
Turkey	8.7	8.8	8.7	1.49	1.71	1.38	1.32	13.0	15.0	12.0	11.5
Others	9.4	9.6	8.8	1.72	1.87	1.81	1.82	16.1	17.9	15.9	16.0

1/ Algeria, Libya, Morocco, and Tunisia.

April 1990

Production Estimates and Crop Assessment Division, FAS, USDA



TABLE 4  
Coarse Grains Area, Yield, and Production  
World and Selected Countries and Regions

COUNTRY/REGION	AREA			YIELD				PRODUCTION			
	Prel. 1987/88	Proj. 1988/89	Proj. 1989/90	Prel. 1987/88	1988/89	1989/90 Proj. Mar.	1989/90 Proj. Apr.	Prel. 1987/88	1988/89	1989/90 Proj. Mar.	1989/90 Proj. Apr.
<b><i>TOTAL COARSE GRAINS</i></b>	---Million Hectares---			---Metric Tons Per Hectare---				---Million Metric Tons---			
World	323.6	324.5	323.1	2.45	2.25	2.47	2.47	792.1	728.6	798.2	797.9
United States	35.4	32.8	37.1	6.12	4.56	5.97	5.97	217.0	149.7	221.4	221.4
Total Foreign	288.2	291.7	286.0	2.00	1.98	2.02	2.02	575.1	578.9	576.7	576.4
Maj. Foreign Exporters	23.5	20.8	21.5	2.41	2.46	2.41	2.42	56.6	51.1	51.9	52.0
Argentina	4.4	2.9	3.1	2.99	2.49	2.78	2.75	13.1	7.3	8.6	8.6
Australia	4.6	4.4	4.2	1.55	1.52	1.71	1.64	7.2	6.7	7.1	6.8
Canada	8.0	7.1	8.3	3.21	2.76	2.83	2.83	25.5	19.7	23.5	23.5
South Africa	4.6	4.6	4.3	1.73	2.86	1.93	2.04	7.9	13.0	8.3	8.8
Thailand	2.0	1.8	1.6	1.50	2.50	2.70	2.70	2.9	4.5	4.3	4.3
Major Importers	107.8	106.5	104.1	2.65	2.55	2.72	2.72	285.7	271.7	283.2	283.2
Eastern Europe	17.9	18.3	18.5	3.50	3.24	3.60	3.60	62.8	59.5	66.5	66.5
EC-12	19.0	19.2	18.6	4.34	4.60	4.37	4.39	82.4	88.1	81.5	81.5
Other W. Europe	3.1	3.2	3.1	3.50	3.52	3.97	3.99	10.8	11.3	12.3	12.4
Mexico	7.8	7.5	7.6	1.87	1.85	1.88	1.88	14.5	13.8	14.5	14.3
USSR	59.5	57.8	55.9	1.91	1.69	1.91	1.91	113.7	97.5	107.0	107.0
Other Major Import. 2/	0.5	0.5	0.4	3.14	3.39	3.35	3.34	1.4	1.5	1.5	1.5
Other Foreign	156.9	164.5	160.4	1.48	1.56	1.51	1.50	232.8	256.1	241.6	241.2
Brazil	13.6	13.4	13.3	1.87	2.00	1.91	1.91	25.5	26.7	25.3	25.3
China	28.7	27.3	27.9	3.33	3.46	3.27	3.27	95.8	94.3	91.3	91.3
India	36.6	39.1	38.6	0.65	0.81	0.81	0.81	23.8	31.7	31.2	31.2
Indonesia	2.7	2.9	2.6	1.79	1.82	1.85	1.85	4.8	5.2	4.8	4.8
Nigeria	9.4	10.1	9.9	0.72	0.84	0.83	0.83	6.8	8.5	8.2	8.2
Philippines	3.7	3.8	3.6	1.18	1.21	1.21	1.21	4.4	4.5	4.4	4.4
Turkey	4.3	4.4	4.4	2.15	2.29	1.78	1.68	9.2	10.0	7.6	7.4
Others	57.9	63.6	60.0	1.08	1.18	1.14	1.14	62.6	75.1	68.8	68.6
<b><i>BARLEY</i></b>											
World	79.6	76.4	73.6	2.27	2.18	2.30	2.29	180.5	166.4	168.9	168.8
United States	4.0	3.1	3.4	2.82	2.04	2.61	2.61	11.4	6.3	8.8	8.8
Total Foreign	75.6	73.4	70.2	2.24	2.18	2.28	2.28	169.2	160.1	160.1	160.0
Australia	2.4	2.2	2.3	1.46	1.47	1.77	1.77	3.5	3.3	4.1	4.1
Canada	5.0	4.2	4.7	2.79	2.46	2.48	2.48	14.0	10.2	11.7	11.7
China	3.4	2.7	2.8	1.78	2.31	2.09	2.09	6.0	6.3	5.7	5.7
Eastern Europe	4.3	4.4	4.6	3.79	3.72	4.00	4.00	16.3	16.3	18.4	18.4
EC-12	12.2	12.2	11.8	3.84	4.14	3.90	3.91	46.8	50.3	46.0	46.1
Other W. Europe	1.6	1.7	1.5	3.13	3.27	3.74	3.76	5.2	5.6	5.7	5.7
Turkey	3.2	3.3	3.4	1.88	2.12	1.56	1.46	6.0	7.0	5.0	4.9
USSR	30.7	29.7	27.5	1.91	1.50	1.80	1.80	58.4	44.5	49.5	49.5
Others	12.8	12.9	11.7	1.02	1.28	1.20	1.19	13.0	16.6	14.1	13.9

FOOTNOTES AT END OF TABLE

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TABLE 4 (Continued)  
**Coarse Grains Area, Yield, and Production**  
**World and Selected Countries and Regions**

COUNTRY/REGION	AREA			YIELD				PRODUCTION			
	1987/88	Prel. 1988/89	Proj. 1989/90	1987/88	Prel. 1988/89	1989/90 Proj. Mar.	Apr.	1987/88	Prel. 1988/89	1989/90 Proj. Mar.	Apr.
<b><u>CORN</u></b>	---Million Hectares---			---Metric Tons Per Hectare---				---Million Metric Tons---			
World	125.4	124.8	126.9	3.57	3.20	3.61	3.62	447.9	399.4	458.5	459.2
United States	24.1	23.6	26.2	7.52	5.31	7.29	7.29	181.1	125.2	191.2	191.2
Total Foreign	101.3	101.2	100.6	2.63	2.71	2.65	2.66	266.8	274.2	267.3	268.0
Maj. Foreign Exporters	8.0	7.1	6.6	2.35	3.05	2.58	2.65	18.8	21.6	17.0	17.5
Argentina	2.6	1.7	1.7	3.46	2.94	3.24	3.24	9.0	5.0	5.5	5.5
South Africa	3.7	3.8	3.5	1.93	3.28	2.14	2.29	7.1	12.4	7.5	8.0
Thailand	1.8	1.6	1.4	1.56	2.63	2.86	2.86	2.7	4.2	4.0	4.0
Major Importers	22.0	22.3	22.0	3.73	3.73	3.83	3.85	82.1	83.0	84.4	84.5
Eastern Europe	7.4	7.4	7.4	3.94	3.50	4.03	4.03	29.2	26.0	29.8	29.8
EC-12	3.7	4.1	3.8	6.99	7.00	6.85	6.88	25.9	28.5	26.3	26.4
Other W. Europe	0.2	0.2	0.2	8.00	8.55	8.77	8.77	1.8	1.9	1.9	1.9
Mexico	6.0	6.0	5.9	1.65	1.68	1.67	1.68	9.9	10.1	10.0	9.9
USSR	4.6	4.4	4.5	3.24	3.62	3.56	3.56	14.8	16.0	16.0	16.0
Other Maj. Import. 2/	0.1	0.1	0.1	4.17	4.15	4.17	4.17	0.5	0.4	0.5	0.5
Other Foreign	71.2	71.9	72.1	2.33	2.36	2.30	2.30	165.9	169.6	165.9	166.0
Brazil	13.2	12.9	12.8	1.88	2.02	1.91	1.91	24.8	26.1	24.5	24.5
Canada	1.0	1.0	1.0	7.02	5.47	6.31	6.31	7.0	5.4	6.4	6.4
China	20.2	19.7	20.3	3.92	3.93	3.72	3.72	79.2	77.4	75.5	75.5
Egypt	0.8	0.8	0.8	4.97	5.20	5.33	5.37	4.1	4.3	4.4	4.5
India	5.6	5.9	6.0	1.03	1.40	1.33	1.33	5.7	8.3	8.0	8.0
Indonesia	2.7	2.9	2.6	1.79	1.82	1.85	1.85	4.8	5.2	4.8	4.8
Philippines	3.7	3.8	3.6	1.18	1.21	1.21	1.21	4.4	4.5	4.4	4.4
Zimbabwe	1.2	1.2	1.2	1.80	1.56	1.63	1.63	2.2	1.9	2.0	2.0
Others	22.8	23.7	23.7	1.48	1.54	1.51	1.51	33.7	36.5	35.9	35.9
<b><u>SORGHUM</u></b>											
World	42.2	42.8	43.2	1.33	1.29	1.30	1.29	56.1	55.4	56.4	55.8
United States	4.3	3.7	4.5	4.36	4.00	3.48	3.48	18.6	14.6	15.7	15.7
Total Foreign	38.0	39.1	38.7	0.99	1.04	1.05	1.04	37.6	40.7	40.7	40.1
Argentina	1.0	0.6	0.7	3.00	2.33	3.00	2.86	3.0	1.4	2.1	2.0
Australia	0.8	0.7	0.6	2.19	1.65	2.00	1.42	1.7	1.2	1.2	0.8
China	1.9	1.8	1.8	2.91	3.14	2.94	2.94	5.4	5.6	5.4	5.4
India	16.0	14.8	15.5	0.59	0.71	0.74	0.74	9.5	10.5	11.5	11.5
Mexico	1.4	1.1	1.3	2.91	2.83	2.94	2.92	4.0	3.1	3.9	3.8
Nigeria	4.3	4.4	4.4	0.67	0.80	0.80	0.80	2.9	3.5	3.5	3.5
South Africa	0.3	0.3	0.3	1.52	1.58	1.65	1.65	0.5	0.4	0.5	0.5
Sudan	3.0	5.3	4.1	0.43	0.83	0.61	0.61	1.3	4.4	2.5	2.5
Thailand	0.2	0.2	0.2	1.03	1.39	1.49	1.49	0.2	0.3	0.3	0.3
Others	9.1	9.9	9.8	0.99	1.04	1.00	1.00	9.1	10.3	9.9	9.9

FOOTNOTES AT END OF TABLE

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TABLE 4 (Continued)  
**Coarse Grains Area, Yield, and Production**  
**World and Selected Countries and Regions**

COUNTRY/REGION	AREA			YIELD				PRODUCTION			
	Prel. 1987/88	Proj. 1988/89	Proj. 1989/90	Prel. 1987/88	1988/89	1989/90 Proj. Mar.	Apr.	Prel. 1987/88	1988/89	1989/90 Proj. Mar.	Apr.
<b><u>OATS</u></b>	---Million Hectares---			---Metric Tons Per Hectare---				---Million Metric Tons---			
World	23.6	22.1	22.6	1.84	1.70	1.84	1.84	43.3	37.6	41.6	41.6
United States	2.8	2.2	2.8	1.95	1.41	1.95	1.95	5.4	3.2	5.4	5.4
Total Foreign	20.8	19.9	19.8	1.82	1.73	1.82	1.83	37.9	34.4	36.2	36.2
USSR	11.8	10.9	10.6	1.57	1.40	1.56	1.56	18.5	15.3	16.5	16.5
Maj. Foreign Exporters	3.5	3.5	3.7	1.96	1.94	1.96	1.97	6.8	6.8	7.3	7.3
Argentina	0.5	0.4	0.4	1.30	1.27	1.39	1.44	0.7	0.5	0.6	0.6
Australia	1.3	1.3	1.2	1.32	1.49	1.44	1.44	1.7	2.0	1.7	1.7
Canada	1.3	1.4	1.7	2.37	2.18	2.08	2.08	3.0	3.0	3.5	3.5
Sweden	0.4	0.4	0.4	3.63	3.14	3.56	3.56	1.4	1.3	1.5	1.5
Other Foreign	5.5	5.4	5.5	2.27	2.28	2.25	2.25	12.5	12.4	12.4	12.4
China	0.6	0.6	0.6	1.10	1.19	1.15	1.15	0.6	0.7	0.6	0.6
Eastern Europe	1.4	1.4	1.4	2.79	2.63	2.67	2.67	4.0	3.7	3.8	3.8
East Germany	0.1	0.1	0.1	4.28	3.43	3.33	3.33	0.6	0.5	0.5	0.5
Poland	0.9	0.9	0.9	2.84	2.62	2.70	2.70	2.4	2.2	2.3	2.3
EC-12	1.8	1.8	1.7	3.02	3.10	2.74	2.74	5.3	5.5	4.8	4.8
France	0.3	0.3	0.3	3.91	3.77	3.90	3.78	1.0	1.0	1.0	1.0
West Germany	0.6	0.6	0.5	4.30	4.23	3.78	3.78	2.4	2.4	1.9	1.9
Finland	0.4	0.4	0.4	2.21	2.21	3.14	3.24	0.8	0.9	1.4	1.4
Norway	0.1	0.1	0.1	3.87	2.98	3.68	3.68	0.5	0.4	0.5	0.5
Others	1.3	1.2	1.2	1.06	1.09	1.11	1.08	1.3	1.3	1.4	1.3
<b><u>RYE</u></b>											
World	15.6	15.9	16.7	2.12	2.08	2.29	2.29	33.0	33.0	38.2	38.2
United States	0.3	0.2	0.2	1.82	1.55	1.76	1.76	0.5	0.4	0.3	0.3
Total Foreign	15.3	15.6	16.5	2.13	2.08	2.30	2.29	32.5	32.6	37.9	37.9
USSR	9.7	10.1	10.6	1.86	1.83	2.03	2.03	18.1	18.5	21.5	21.5
Maj. Foreign Exporter											
Canada	0.3	0.3	0.5	1.58	1.04	1.72	1.72	0.5	0.3	0.8	0.8
Other Foreign											
Eastern Europe	3.7	3.9	3.9	2.72	2.58	2.85	2.85	10.0	10.0	11.1	11.1
East Germany	0.7	0.6	0.6	3.49	2.94	3.34	3.34	2.3	1.8	2.1	2.1
Poland	2.6	2.9	2.9	2.57	2.51	2.80	2.80	6.8	7.2	8.1	8.1
Czechoslovakia	0.1	0.2	0.2	3.49	3.42	3.42	3.42	0.5	0.5	0.5	0.5
EC-12	1.0	0.9	1.0	2.93	3.05	3.30	3.29	3.0	2.9	3.2	3.2
Denmark	0.1	0.1	0.1	3.77	4.52	4.83	4.80	0.5	0.4	0.5	0.5
West Germany	0.4	0.4	0.4	3.89	4.19	4.69	4.69	1.6	1.6	1.8	1.8
Others	0.6	0.5	0.6	1.77	2.06	2.30	2.14	1.0	1.0	1.3	1.3

1/ Total of barley, corn, sorghum, oats, and rye shown below plus millet and mixed grain.

2/ Japan, Republic of Korea, and Taiwan.

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TABLE 5

## Rice Area, Yield, and Production World and Selected Countries and Regions

COUNTRY/REGION	AREA		YIELD		PRODUCTION (Rough Basis)		MILLING RATE		PRODUCTION (Milled Basis)							
	Prel. 1987/88	Proj. 1989/90	Prel. 1988/8	Prel. 1989/90	Prel. 1988/89	1989/90 Proj. Mar. Apr.	Prel. 1987/88	Prel. 1988/89	Prel. 1987/88	1989/90 Proj. Mar. Apr.						
	——Million Hectares——		——Metric Tons Per Hectare——		——Million Metric Tons——		——In Percent——		——Million Metric Tons——							
World	141.4	145.5	145.6		462.8	487.6	503.9	503.6	67.8	67.7	67.5	67.5	313.7	330.2	340.2	340.0
United States	0.9	1.2	1.1		5.9	7.3	7.0	7.0	69.9	72.1	70.0	70.0	4.1	5.2	4.9	4.9
Total Foreign	140.4	144.3	144.6		456.9	480.4	496.9	496.5	67.8	67.6	67.5	67.5	309.6	324.9	335.3	335.0
Maj. Foreign Exporters	15.7	16.8	17.1		34.3	38.4	39.3	39.3	64.1	64.1	64.0	64.0	22.0	24.6	25.2	25.2
Burma	4.5	4.5	4.7		11.4	12.5	13.5	13.5	60.0	60.0	60.0	60.0	6.8	7.5	8.1	8.1
Pakistan	2.0	2.0	2.1		4.9	4.8	4.8	4.8	66.7	66.7	66.7	66.7	3.2	3.2	3.2	3.2
Thailand	9.2	10.3	10.3		18.0	21.1	21.0	21.0	66.0	66.0	66.0	66.0	11.9	13.9	13.9	13.9
Major Importers	12.9	13.0	13.3		54.0	55.8	57.6	57.6	66.2	66.2	66.1	66.1	35.7	37.0	38.1	38.1
EC-12	0.3	0.3	0.3		1.9	2.0	2.0	2.0	67.3	67.3	67.0	67.0	1.3	1.3	1.3	1.3
Indonesia	9.8	9.8	10.1		41.5	42.3	44.3	44.3	65.0	65.0	65.0	65.0	27.0	27.5	28.8	28.8
Nigeria	0.6	0.6	0.6		0.8	0.8	0.8	0.8	66.5	66.5	66.5	66.5	0.6	0.6	0.5	0.5
Republic of Korea	1.3	1.3	1.3		7.6	8.4	8.2	8.2	72.3	72.3	72.0	72.0	5.5	6.1	5.9	5.9
Other Maj. Import. 1/	0.9	1.0	1.0		2.1	2.3	2.4	2.4	65.5	65.4	65.4	65.4	1.4	1.5	1.6	1.6
Other Foreign	111.8	114.5	114.1		368.6	386.1	400.0	399.6	68.3	68.2	68.0	68.0	251.9	263.3	272.0	271.8
Australia	0.1	0.1	0.1		0.8	0.8	0.9	0.9	71.5	71.5	71.5	71.5	0.5	0.6	0.6	0.7
Bangladesh	10.3	10.2	10.7		23.1	23.3	26.6	26.6	66.7	66.7	66.7	66.7	15.4	15.6	17.7	17.7
Brazil	6.0	5.3	4.5		11.8	11.0	9.4	9.2	68.0	68.0	68.0	68.0	8.0	7.5	6.4	6.3
China	32.1	31.9	32.3		173.9	169.1	179.0	179.0	70.0	70.0	70.0	70.0	121.7	118.4	125.3	125.3
India	38.8	41.9	41.5		85.3	106.0	105.0	105.0	66.7	66.7	66.7	66.7	56.9	70.7	70.0	70.0
Japan	2.1	2.1	2.1		13.3	12.4	12.9	12.9	72.8	72.8	72.8	72.8	9.7	9.0	9.4	9.4
Philippines	3.3	3.4	3.4		8.7	9.2	9.4	9.2	65.0	65.0	65.0	65.0	5.6	6.0	6.1	6.0
USSR	0.7	0.7	0.7		2.7	2.9	2.7	2.7	65.0	65.0	65.0	65.0	1.7	1.9	1.8	1.8
Vietnam	5.6	5.8	5.9		15.3	16.8	18.0	18.0	65.0	65.0	65.0	65.0	9.9	10.9	11.7	11.7
Others	12.8	13.2	12.9		33.8	34.6	36.1	36.1	66.2	66.2	63.8	63.8	22.4	22.9	23.1	23.0

1/ Hong Kong, Iran, Ivory Coast, and Saudi Arabia.

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TABLE 6  
Oilseeds Area, Yield, and Production  
World and Selected Countries and Regions

COUNTRY/REGION	AREA			YIELD				PRODUCTION			
	Prel.	Proj.		Prel.	1989/90 Proj.			Prel.	1989/90 Proj.		
	1987/88	1988/89	1989/90	1987/88	1988/89	Mar.	Apr.	1987/88	1988/89	Mar.	Apr.
	---Million Hectares---			---Metric Tons Per Hectare---				---Million Metric Tons---			
<u>SOYBEANS</u>											
World	54.02	55.69	57.36	1.92	1.71	1.88	1.87	103.67	95.16	107.28	107.13
United States	23.14	23.22	24.03	2.28	1.82	2.18	2.18	52.75	42.15	52.44	52.44
Total Foreign	30.88	32.47	33.33	1.65	1.63	1.66	1.64	50.93	53.00	54.84	54.69
Maj. Foreign Exporters	14.78	16.17	16.30	1.88	1.82	1.90	1.87	27.72	29.40	31.00	30.50
Argentina	4.26	4.00	5.00	2.28	1.60	2.10	2.10	9.70	6.40	10.50	10.50
Brazil	10.52	12.17	11.30	1.71	1.89	1.81	1.77	18.02	23.00	20.50	20.00
Other Foreign	16.10	16.30	17.03	1.44	1.45	1.42	1.42	23.21	23.60	23.84	24.19
Canada	0.46	0.53	0.54	2.75	2.16	2.26	2.26	1.27	1.15	1.22	1.22
China	8.41	8.12	8.00	1.48	1.43	1.35	1.35	12.47	11.65	10.80	10.80
Eastern Europe	0.53	0.56	0.54	1.31	1.20	1.44	1.44	0.69	0.67	0.78	0.78
EC-12	0.56	0.52	0.61	3.16	3.21	2.91	2.91	1.78	1.66	1.78	1.78
India	1.54	1.66	1.90	0.58	0.91	0.89	0.89	0.90	1.50	1.70	1.70
Indonesia	0.95	1.18	1.00	1.00	1.02	1.05	1.05	0.95	1.20	1.05	1.05
Paraguay	0.62	0.85	0.98	1.79	1.90	1.84	1.84	1.10	1.62	1.40	1.80
USSR	0.78	0.76	0.83	0.91	1.16	1.11	1.11	0.71	0.88	0.92	0.92
Others	2.24	2.13	2.63	1.49	1.54	1.59	1.58	3.34	3.28	4.19	4.15
<u>COTTONSEED</u>											
World	31.51	33.81	32.97	0.99	0.95	0.95	0.94	31.31	32.15	31.13	31.07
United States	4.06	4.84	3.84	1.29	1.14	1.13	1.13	5.23	5.50	4.32	4.32
Total Foreign	27.46	28.97	29.13	0.95	0.92	0.92	0.92	26.07	26.65	26.80	26.75
China	4.84	5.53	5.36	1.49	1.27	1.25	1.25	7.22	7.05	6.70	6.70
India	6.46	7.30	7.40	0.50	0.49	0.55	0.55	3.20	3.60	4.09	4.09
Pakistan	2.57	2.50	2.71	1.14	1.14	1.08	1.08	2.94	2.85	2.92	2.92
USSR	3.53	3.43	3.33	1.27	1.42	1.46	1.46	4.49	4.87	4.85	4.85
Others	10.06	10.21	10.34	0.82	0.81	0.80	0.79	8.23	8.28	8.24	8.19
<u>PEANUTS</u>											
World	18.23	19.78	19.36	1.15	1.18	1.14	1.14	20.87	23.37	22.08	22.05
United States	0.63	0.66	0.67	2.62	2.74	2.76	2.72	1.64	1.81	1.83	1.81
Total Foreign	17.60	19.12	18.69	1.09	1.13	1.08	1.08	19.23	21.57	20.25	20.24
Argentina	0.19	0.15	0.16	2.34	1.62	2.31	2.31	0.45	0.24	0.37	0.37
China	3.02	2.91	2.96	2.04	1.95	1.79	1.79	6.17	5.69	5.30	5.30
India	6.84	8.43	8.10	0.86	1.07	0.99	0.99	5.85	9.00	8.00	8.00
Senegal	0.85	0.90	0.79	1.10	0.76	0.93	0.93	0.93	0.69	0.74	0.74
South Africa	0.15	0.19	0.19	1.33	1.24	1.24	1.24	0.20	0.23	0.23	0.23
Sudan	0.58	0.58	0.55	0.76	0.78	0.73	0.73	0.44	0.45	0.40	0.40
Others	5.97	5.97	5.95	0.87	0.88	0.88	0.87	5.19	5.26	5.21	5.20

CONTINUED



TABLE 6 (Continued)  
Oilseeds Area, Yield, and Production  
World and Selected Countries and Regions

COUNTRY/REGION	AREA			YIELD				PRODUCTION			
	Prel.		Proj.	Prel.		1989/90 Proj.		Prel.		1989/90 Proj.	
	1987/88	1988/89	1989/90	1987/88	1988/89	Mar.	Apr.	1987/88	1988/89	Mar.	Apr.
<u>SUNFLOWERSEED</u>	---Million Hectares---			---Metric Tons Per Hectare---				---Million Metric Tons---			
World	15.52	14.97	15.84	1.35	1.36	1.38	1.37	20.92	20.31	21.84	21.73
United States	0.72	0.78	0.74	1.65	1.05	1.10	1.10	1.18	0.81	0.81	0.81
Total Foreign	14.81	14.20	15.10	1.33	1.37	1.39	1.39	19.74	19.50	21.03	20.92
Argentina	2.06	2.20	2.90	1.36	1.41	1.38	1.34	2.80	3.10	4.00	3.90
China	0.89	0.83	0.73	1.40	1.42	1.34	1.34	1.24	1.18	0.98	0.98
EC-12	2.30	2.12	1.99	1.81	1.87	1.64	1.64	4.16	3.97	3.27	3.27
East Europe	1.38	1.31	1.33	1.74	1.62	1.84	1.84	2.40	2.12	2.45	2.45
USSR	4.16	4.28	4.40	1.46	1.44	1.59	1.59	6.08	6.16	7.00	7.00
Others	4.03	3.46	3.75	0.76	0.86	0.89	0.89	3.06	2.97	3.34	3.33
<u>RAPESEED</u>											
World	16.80	17.88	16.99	1.40	1.26	1.27	1.27	23.44	22.51	21.59	21.63
Total Foreign	16.80	17.88	16.99	1.40	1.26	1.27	1.27	23.44	22.51	21.59	21.63
Canada	2.67	3.67	2.91	1.44	1.17	1.05	1.05	3.85	4.31	3.06	3.06
China	5.27	4.94	4.99	1.25	1.02	1.09	1.09	6.61	5.04	5.44	5.44
EC-12	1.86	1.84	1.63	3.20	2.81	3.08	3.07	5.95	5.18	5.01	5.00
East Europe	0.92	0.88	1.00	2.35	2.49	2.49	2.57	2.17	2.19	2.47	2.57
India	4.62	4.87	4.80	0.75	0.86	0.79	0.79	3.46	4.20	3.80	3.80
Others	1.46	1.69	1.67	0.96	0.94	1.08	1.06	1.40	1.59	1.81	1.77
<u>FLAXSEED</u>											
World	3.99	3.71	3.97	0.57	0.44	0.48	0.48	2.27	1.62	1.92	1.92
United States	0.19	0.09	0.07	1.01	0.45	0.47	0.47	0.19	0.04	0.03	0.03
Total Foreign	3.80	3.62	3.89	0.55	0.44	0.48	0.48	2.08	1.58	1.88	1.88
Argentina	0.66	0.56	0.60	0.82	0.74	0.82	0.82	0.54	0.41	0.49	0.49
Canada	0.59	0.50	0.64	1.23	0.74	0.83	0.83	0.73	0.37	0.53	0.53
India	1.15	1.18	1.20	0.34	0.30	0.33	0.33	0.39	0.35	0.40	0.40
USSR	1.07	1.04	1.10	0.21	0.21	0.20	0.20	0.23	0.22	0.23	0.23
Others	0.33	0.33	0.35	0.59	0.66	0.67	0.67	0.20	0.22	0.24	0.24
<u>MAJOR OILSEEDS</u>	140.06	145.84	146.49	1.45	1.34	1.41	1.40	202.47	195.12	205.83	205.54
United States	28.73	29.58	29.35	2.12	1.70	2.03	2.02	60.99	50.31	59.44	59.42
Total Foreign	111.34	116.26	117.14	1.27	1.25	1.25	1.25	141.48	144.81	146.40	146.12
<u>COPRA</u>	--	--	--	--	--	--	--	4.32	4.42	4.57	4.56
<u>PALM KERNEL</u>	--	--	--	--	--	--	--	2.69	2.94	3.15	3.22
<u>TOTAL OILSEEDS</u>	--	--	--	--	--	--	--	209.49	202.47	213.56	213.32
<u>PALM OIL 1/</u>	--	--	--	--	--	--	--	8.39	9.45	10.19	10.42

1/ Not included in total oilseeds.



TABLE 7

## Cotton Area, Yield, and Production World and Selected Countries and Regions

COUNTRY/REGION	AREA			YIELD				PRODUCTION			
	Prel. 1987/88	Proj. 1988/89	Proj. 1989/90	Prel. 1987/88	Proj. 1988/89	Mar. 1989	Apr. 1989	Prel. 1987/88	1988/89	Mar. 1989	Proj. Apr. 1989
	---Million Hectares---			---Kilograms Per Hectare---				---Million 480-Pound Bales---			
World	31.1	34.0	32.9	568	541	531	528	81.2	84.5	80.1	79.8
United States	4.1	4.8	3.8	791	694	694	690	14.8	15.4	12.2	12.2
Total Foreign	27.1	29.2	29.1	534	516	510	507	66.4	69.1	67.8	67.6
Maj. Foreign Exporters	12.9	13.5	13.4	765	750	717	715	45.2	46.4	44.0	44.0
Australia	0.2	0.2	0.2	1149	1538	1451	1355	1.3	1.3	1.5	1.4
Central America 1/	0.1	0.1	0.1	814	885	890	890	0.4	0.4	0.4	0.4
China	4.8	5.5	5.4	876	751	731	731	19.5	19.1	18.0	18.0
Egypt	0.4	0.4	0.4	845	718	626	639	1.6	1.4	1.2	1.3
Mexico	0.2	0.3	0.2	956	1178	885	885	1.0	1.4	0.8	0.8
Pakistan	2.6	2.5	2.7	572	570	539	539	6.7	6.6	6.7	6.7
Sudan	0.3	0.3	0.3	404	437	396	396	0.6	0.7	0.6	0.6
Turkey	0.6	0.7	0.7	916	919	807	807	2.5	3.0	2.7	2.7
USSR	3.5	3.4	3.3	709	801	797	797	11.5	12.6	12.2	12.2
Major Importers 2/	0.3	0.4	0.4	828	817	830	830	1.2	1.6	1.5	1.5
Other Foreign	13.9	15.2	15.3	314	300	320	316	20.0	21.0	22.4	22.1
Argentina	0.5	0.5	0.6	547	389	505	505	1.3	0.9	1.3	1.3
Brazil	2.2	2.4	2.3	355	311	324	300	3.5	3.4	3.5	3.2
India	6.5	7.3	7.4	248	247	277	277	7.4	8.3	9.4	9.4
Syria	0.1	0.2	0.2	751	672	844	844	0.4	0.5	0.6	0.6
Others	4.6	4.9	4.8	349	352	347	343	7.4	7.9	7.5	7.6

1/ Nicaragua, Guatemala, El Salvador, Honduras, and Costa Rica.

2/ Western Europe, Eastern Europe, Japan, Hong Kong, Republic of Korea, and Taiwan.

April 1990

Production Estimates and Crop Assessment Division, FAS, USDA



TABLE 8

The table below presents a 8-year record of the difference between the April projections and the final estimates. Using world wheat production as an example, changes between April projections and the final estimates have averaged 2.7 million tons (0.6 percent) and ranged from -6.8 to 6.5 million tons. The April projection has been below the final 4 times and above the final 4 times.

### Reliability of Production Projections

COMMODITY AND REGION	PROJECTION AND FINAL ESTIMATES, 1981/82 – 1988/89 1/					
	Difference		Lowest	Highest	Below	Above
	Average	Average	Difference		Final	Final
	Percent	---- <i>Million Metric Tons</i> ----			Number of Years 2/	
<i>WHEAT</i>						
World	0.6	2.7	-6.8	6.5	4	4
U.S.	0.1	0.0	-0.1	0.1	3	1
Foreign	0.7	2.7	-6.8	6.5	4	4
<i>COARSE GRAINS 3/</i>						
World	0.6	4.3	-7.1	4.3	5	3
U.S.	0.1	0.2	-0.2	1.3	4	1
Foreign	0.8	4.4	-7.1	4.3	5	3
<i>RICE (Milled)</i>						
World	1.5	4.6	-9.0	1.3	7	1
U.S.	0.8	0.0	-0.1	0.1	2	1
Foreign	1.5	4.6	-9.0	1.3	7	1
<i>SOYBEANS</i>						
World	1.8	1.7	-2.5	1.7	5	3
U.S.	1.4	0.7	-1.1	1.8	3	4
Foreign	2.4	1.0	-2.2	0.0	8	0
			---- <i>Million 480-lb. Bales</i> ----			
<i>COTTON</i>						
World	1.0	0.8	-3.0	0.1	6	2
U.S.	0.1	0.0	0.0	0.1	1	2
Foreign	1.2	0.8	-3.0	0.1	6	2
<u>UNITED STATES</u>			----- <i>Million Bushels</i> -----			
<i>CORN</i>	0.1	6	-8	38	1	1
<i>SORGHUM</i>	0.1	1	0	4	0	2
<i>BARLEY</i>	0.5	3	-3	11	4	1
<i>OATS</i>	0.1	0	-2	0	2	0

1/ The final estimate for 1981/82-1988/89 is defined as the November estimate following the marketing year and for 1988/89 last month's estimate.

2/ May not total eight if projection was the same as the final.

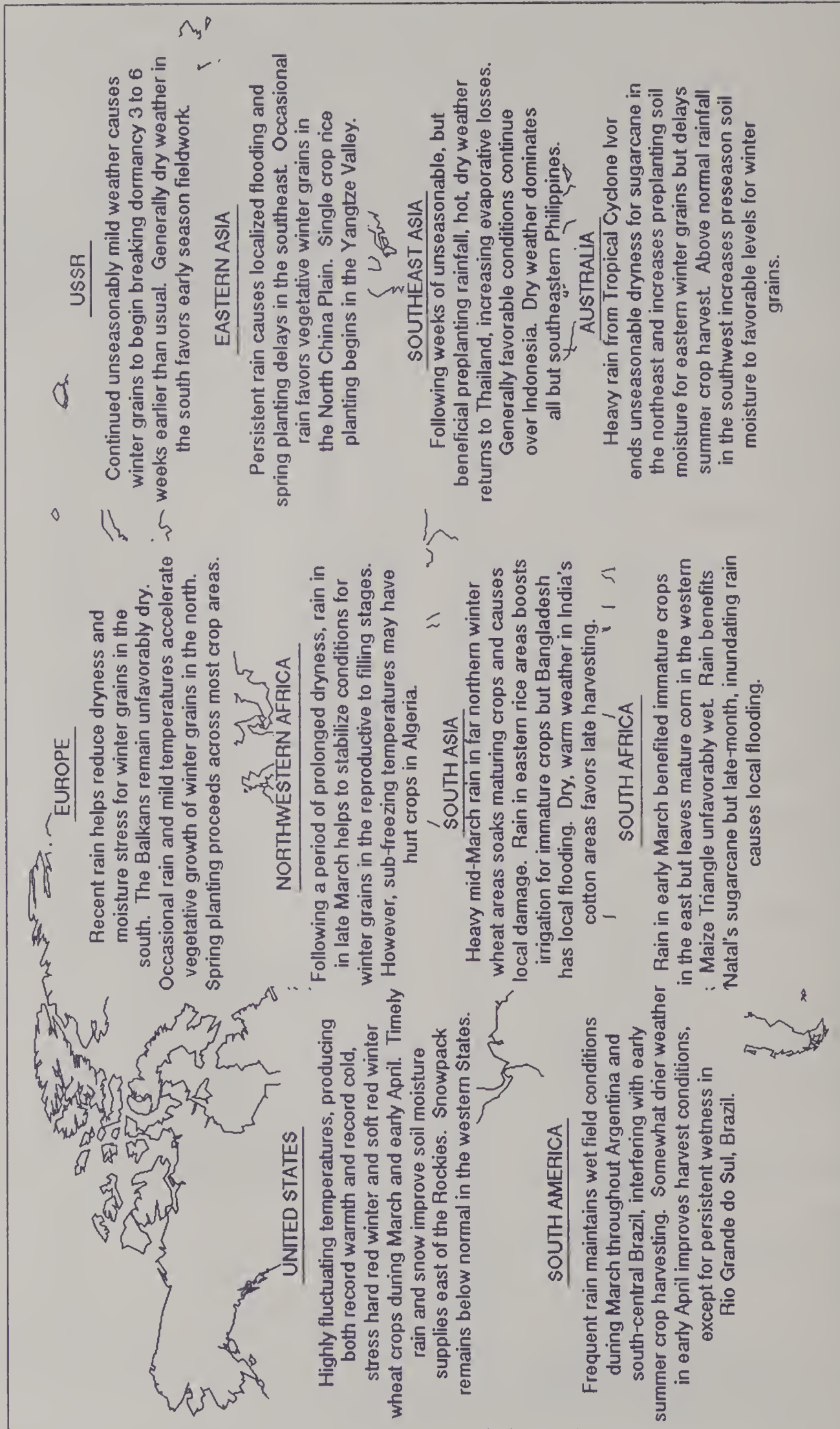
3/ Includes corn, sorghum, barley, oats, rye, millet, and mixed grain.



# WORLD AGRICULTURAL WEATHER HIGHLIGHTS

MARCH 10, 1990

NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY



(More details are available in the Weekly Weather and Crop Bulletin. Subscription information may be obtained by calling (202) 447-7917.)



## WEATHER BRIEFS

### MILD WEATHER CONTINUES IN THE EUROPEAN USSR

Unseasonably warm weather continued through the first week of April over the Soviet Union's major winter wheat region, giving above-normal temperatures for 13 consecutive weeks. The unseasonably warm weather has caused the green-up of winter grains to be earlier and more widespread than normal and has also allowed for early-spring crop planting. Cold outbreaks may have burned some of the new growth in the lower Volga Valley and northern North Caucasus during the last week of March. Winter precipitation was below normal in Moldavia and western and south central Ukraine. However, recent rainfall has moistened topsoils benefiting winter grains and newly planted spring crops. Elsewhere, near- to above-normal winter precipitation and continued warm weather has created favorable conditions for early planting of spring crops west of the Volga Valley.

### HEAVY RAINS CONTINUE IN EASTERN AUSTRALIA

Heavy precipitation continued during March and into early April in northern and eastern Queensland and southern and coastal New South Wales. Coastal precipitation amounted to roughly 200 millimeters (mm) per week for the last 3 weeks, with some local amounts reaching 500 mm during 1 week. Flooding has occurred along the coast and in central Queensland and coastal New South Wales. Inland and south into Victoria, precipitation has amounted to 25 to 75 mm per week. Wet conditions have delayed cotton and summer grain harvest, but benefited rangeland and preplanting winter wheat prospects. If dry weather does not return to this region soon, cotton quality levels could decline.

### TIMELY RAIN BENEFITS SOUTHERN EUROPE

Widespread rain returned to Spain, southern France, Italy, and the western Balkans during the last week of March through April 10. These rains relieved moisture-stressed winter crops and improved soil moisture levels for spring planting. Temperatures in these areas have been slightly below normal but still very good for winter grain growth. The precipitation has been too light and scattered to provide much benefit to crops in the very dry southern and eastern Balkan Peninsula. Temperatures there have been above normal, contributing further to stress conditions for winter grains.

### RAIN BRINGS SOME RELIEF TO NORTHWEST AFRICA

Widespread rain during the end of March into early April slowed the decline in conditions of winter grains in Morocco, Algeria, and Tunisia. Dry conditions continued through most of March as winter grains were reaching their reproductive stage, so the recent rains were very beneficial. Even when considering the benefits of this rain, yields will be below normal due to cumulative stress during growing season.



## PRODUCTION BRIEFS

### HONDURAS: FORESTRY SITUATION

The nominal forest area in Honduras is estimated at 7.6 million hectares. However, 30 to 31 percent of this is presently deforested, while about 38 percent consists of various hardwoods, and 31 percent is in pine. Current assessments indicate that 5 percent of Honduras' total forest resources are depleted each year. This high rate of depletion is primarily due to poor forest management, forest fires, diversion of forest land for agricultural activities, and widespread use of the "slash and burn" farming method. At the present time, reforestation efforts are minimal. However, in 1988, the Honduran Government and the U.S. Agency for International Development signed a US\$20 million agreement designed to improve forest management and productivity, increase the efficiency of the industrial sector, and bolster overseas marketing efforts. If this project is successful, the long-term outlook is for a gradual increase in the production and exports of Honduran forest products.

### CHILE: STRAWBERRY SITUATION

Strawberry production in Chile has remained relatively static over the past several years. Although plantings extend from Region 1 (Arica) in the northern part of the country as far south as Region 10 (Puerto Montt), the Metropolitan Region (Santiago) and Region 6 (Rancagua) account for over 70 percent of total plantings. The leading varieties are Douglas, Pajaro, Chandler, California and Parker. Estimated production for the 1989/90 season is 6,280 tons, down from 7,500 tons a year ago due to phytosanitary problems.

### EAST GERMANY: STORM DAMAGE TO FORESTS MINIMAL

According to the U.S. agricultural attache in Berlin, the February storms that swept across Europe caused minimal damage to East Germany's forests. Preliminary assessments indicate the storms felled approximately 2 million cubic meters (CUM) of wood, primarily in the Thuringer and Erzgebirge regions in the southern part of the country. Normally, East Germany acquires about 10 percent of its annual forest products production target of 11 million CUM from trees that are damaged due to weather. Although early reports indicate that most of the damaged trees are too old or decayed for commercial grade wood, they will help to fulfill the Government's target for fuel wood.

### SPAIN: COLD WEATHER HARMS ALMOND CROP

According to the U.S. agricultural counselor in Madrid, freezing temperatures during early March resulted in the loss of nearly 70 percent of the almond crops in Catalonia, Aragon, and Rioja. In terms of volume, combined losses for these areas are currently estimated at 10,000 to 15,000 tons (shelled basis). Since the cold weather apparently did not affect major growing areas in the Levant or Andalucia, a good-sized 1990/91 crop is still anticipated.



# CHILE: NEW APPLE VARIETIES INTRODUCED

The Red Delicious and Granny Smith varieties constitute over 90 percent of Chile's annual apple crop. In order to satisfy changing consumer tastes, some apple producers have begun to diversify the varietal composition of their orchards by planting the popular, northern European varieties of Elstar, Jonagold, and Cox Orange. To date, 40 hectares have been planted in Region 10 near Osorno, which has climatic conditions similar to northern Europe. An additional 140 hectares is expected to be planted next year. Commercial production is expected in 3 years. By the eighth year, yields are projected to reach 40 tons per hectare. Currently, the average yield from orchards in this region is only about 3 tons per hectare, mainly because the established varieties are poorly suited to the climate.

# UNITED STATES: PLANTING INTENTIONS REPORTED

The National Agricultural Statistics Service reported in the March 30, 1990, Prospective Plantings report that the intended food grains area (wheat, rice, and rye) is expected to total 33.3 million hectares, up 1 percent from last year. Area planted to feed grains (corn, oats, barley, and sorghum), at 43.0 million hectares, is virtually unchanged from 1988. The intended 1990 oilseeds area (soybeans, cotton, peanuts, sunflower, and flaxseed) of 30.6 million hectares is up 1 percent from last year.

TABLE 9

## United States Crop Summary Area Planted And 1990 Intentions

CROP	1988	1989	1990 1/	1990/1989
	----- (Million Hectares) -----			Percent
Corn	27,404,390	29,257,470	30,272,430	103.5
Sorghum	4,185,710	5,116,090	4,634,110	90.6
Oats	5,629,240	4,888,660	4,450,380	91.0
Barley	3,978,510	3,713,030	3,596,880	96.9
All Wheat	26,518,930	31,005,330	31,386,140	101.2
Winter	19,748,870	22,294,780	23,150,700	103.8
Durum	1,350,050	1,534,180	1,355,710	88.4
Other Spring	5,420,010	7,176,370	6,879,730	95.9
Rice	1,186,960	1,105,210	1,174,410	106.3
Soybeans	23,811,960	24,552,540	24,048,700	97.9
Flaxseed	111,290	84,980	76,890	90.5
Peanuts	670,730	674,090	693,640	102.9
Sunflower	824,760	760,820	755,560	99.3
All Cotton	5,064,620	4,273,810	5,013,100	117.3
Upland	4,987,890	4,122,460	4,901,000	118.9
Amer-pima	76,730	151,350	112,100	74.1
Hay	26,327,110	25,655,320	25,097,260	97.8
Dry Edible Beans	601,130	751,750	836,490	111.3
Sweetpotatoes	36,060	35,980	37,680	104.7
Tobacco 2/	256,570	278,670	295,760	106.1
Sugarbeets	537,100	539,370	564,990	104.7

1/ Intended Planting In 1990 As Indicated By Reports From Farmers.

2/ Area Harvested For 1988 And 1989.

#### CANADA: PLANTING INTENTIONS REPORTED

The Statistics Canada planting intentions report for principal field crops, released March 21, indicates that farmers are planning to shift area out of rapeseed, soybeans, barley, and oats into wheat, corn, and flaxseed. Total wheat area is expected to increase 0.3 million hectares from last year to 14.1 million; all the increase is attributed to greater hard red spring plantings, up almost 7 percent from last year. Barley area is expected to decrease to 4.8 million hectares, down 2 percent from last year. The area sown to oats is projected to fall to 1.8 million hectares, down 1 percent from 1989/90. Corn area for 1990/91 is expected to rise 3 percent to 1.0 million hectares. Rapeseed area is forecast at 2.4 million hectares, down 18 percent from last year, while soybean plantings are expected to fall 7 percent this year to 0.5 million. Flaxseed area shows the largest change, increasing 30 percent to 0.8 million hectares.

#### ECUADOR: SHRIMP PRODUCTION DECLINES SHARPLY

Ecuador's shrimp production declined nearly a third in 1989 as a shift in the Humboldt current caused wild larva to move further from Ecuador's coasts, according to the U. S. agricultural attache in Quito. Farmed-shrimp production in Ecuador has traditionally depended on wild larvae due to both cost and quality factors. Laboratory-produced larvae reportedly account for about 20 percent of total shrimp production. With the fall in production, shrimp fell to second place behind bananas in export value in 1989.

#### CHILE: RAPID INCREASES IN ASPARAGUS PRODUCTION

Asparagus production in 1989/90 is estimated at 8,800 tons, up 17 percent, according to a report from the U.S. agricultural attache in Santiago. Area devoted to producing asparagus is approaching 5,000 hectares, more than three times the area utilized in 1985. Lower prices, due in large part to the rapid production increases, are expected to sharply limit further area expansion during the next few years, but higher yields as plantings mature are expected to allow production to reach 25,000 tons. Approximately 40 percent of the 1989/90 crop will be exported fresh, with the largest share going to the United States. The remainder is sold for processing or for domestic consumption.

In Chile most asparagus is grown around the city of Los Angeles with the area around Santiago accounting for the second largest share. Typically, the harvest season starts in early September in the region around Santiago and extends through mid-December in other regions. In recent years, producers have received the equivalent of US\$1,500 per ton for exports and around \$500 per ton for sales to the domestic market or for processing. At maturity, a yield of 7.5 tons per hectare can be expected while production costs will be about \$2,000. Thus, production remains profitable despite the recent price decline.



## CHINA: GOVERNMENT INCREASES EDIBLE OIL PRICES

The Chinese Government recently announced that it will increase the 1990 state contract and negotiated prices for edible oils (rapeseed, sesame, peanut, soybean, cottonseed, and others) by an average of 27 percent to encourage greater production. The new prices, which range from 3.8 yuan per kilogram for cottonseed oil to 4.78 yuan for sesame oil, will be lower than China's free market prices. The increases came too late to affect winter rapeseed planting but they should stimulate cotton, sunflowerseed, and peanut production this year. The soybean oil price increase, the first since 1986, is expected to boost soybean production in the Northeast but is unlikely to affect plantings in other parts of China, where farmers can earn more money by growing corn.

TABLE 10

### China: Edible Oil Prices

Commodity	State (Yuan/kilogram)	Free Market 1/
Peanut oil	4.62	6.49
Rapeseed oil	4.15	5.50
Soybean oil	4.30	5.21
Sesame oil	4.78	10.92
Cottonseed	3.80	5.23

1/ 4.72 Yuan = \$1.00.

## BRAZIL: COFFEE CROP HURT BY IRREGULAR RAINFALL DISTRIBUTION

Brazil's 1990/91 coffee crop was very likely damaged by sporadic rainfall earlier this year in the country's coffee producing states of Parana, Sao Paulo, and Espirito Santo, according to the U.S. agricultural officer in Rio de Janeiro. Last month, the USDA forecast Brazil's 1990/91 coffee harvest at 37 million 60-kilogram bags based on field observations made from January 17 to February 3, 1990. The rainfall pattern in January 1990 was well above normal in San Paulo and Parana, but almost nil in Espirito Santo. For February 1990, rainfall continued below average in Espirito Santo, was below normal in Sao Paulo, and far below normal in Parana. The irregular distribution of rainfall is expected to result in a harvest with a larger than normal proportion of small coffee beans which would consequently lower the total outturn. Most of the trees in Minas Gerais are in a cyclical "off-year" production phase. However, a large number of new coffee trees, planted 3 to 4 years ago in Southwest and Western Minas Gerais, are coming into production this year and will partially offset the expected off-year short crop. The next USDA forecast of Brazilian coffee production is scheduled to be released in this publication in June.

#### UNITED KINGDOM: COMPENSATION FOR INFECTED ANIMALS RAISED

In February, British authorities started paying 100-percent compensation to farmers whose cattle were destroyed because of infection with Bovine Spongiform Encephalopathy (BSE, also known as 'mad cow' disease.) Some critics claim that by paying only 50 percent for the first 18 months of the program, the British Government was less than fully effective in preventing BSE infected animals from entering the marketing chain. Since June 1988, when BSE incidences were first required to be reported to animal health officials, over 10,000 cases affecting nearly 6,000 farms have been reported. The disease affects the brain and nervous system and is very similar to scrapies in sheep which has affected the United Kingdom for several hundred years. British scientists claim, but do not have conclusive proof, that the disease probably crossed to cattle when infected sheep were used in making meat and bone meal. UK efforts to prevent the spread of the disease include a ban on the use of meat meal in animal feed and, as a precautionary measure, a ban on food use of ruminant offals containing nerve tissue. A number of countries, particularly West Germany, have restricted or expressed serious concern about imports of breeding or slaughter animals, semen, beef, or by-products from the United Kingdom.

#### INDONESIA: STEM BORER THREATENS 1990/91 RICE CROP

Indonesia's 1990/91 rice crop is unlikely to reach the record 1989/90 level due in large part to an outbreak of rice stem borer in west Java, according to the U.S. agricultural attache in Jakarta. The occurrence of the insect is blamed on several factors, including the 1986 Government ban on the use of 57 broad spectrum insecticides (as part of an overall policy initiative to adopt integrated pest management), environmental conditions, varietal plantings, and field cultural practices. The 1990/91 main season crop will be harvested in March/April and the secondary crop in December 1990.

#### KENYA: MACADAMIA NUT SITUATION

Kenya produces approximately 350 tons of macadamia nuts each year. The main growing areas are in the Central and Eastern provinces where smallholders intercrop macadamias with coffee. Quality and yields are low due to poor cultivars. Output continues to be constrained by land scarcity and the long wait--8 years--for trees to begin bearing.

#### MEXICO: STRAWBERRY SITUATION

Mexico's 1989/90 fresh strawberry crop is currently forecast at a record 117,000 tons--up 22 percent from last season--due to favorable growing conditions, an 8-percent increase in harvested area, and a significant recovery in yields following the Government's decision to eliminate the acreage quota system. Strawberry plants in Guanajuato and Michoacan sustained some frost damage, but not enough to compromise quality. The net effect actually proved beneficial in that the frost retarded disease and insect infestations, and prevented the usual slump in farmgate prices caused by seasonal oversupplies.



Production of frozen strawberries is expected to recover to a near-record level of 49,500 tons, a 65-percent increase over last season. This projection reflects the greater availability of supplies for processing and lower production costs vis-a-vis a year ago.

TABLE 11

Mexico: Strawberries, Fresh & Frozen

Year	Area Harvested (Hectares)	Yield (Tons/Hectare)	Fresh Production (Metric Tons)	Frozen Production (Metric Tons)
1970/71	6,903	14.98	103,440	N/A
1971/72	5,682	15.53	88,228	N/A
1972/73	6,661	15.72	104,684	N/A
1973/74	6,339	16.24	102,958	N/A
1974/75	5,328	16.44	87,618	N/A
1975/76	5,684	15.71	89,321	N/A
1976/77	5,529	15.98	88,327	N/A
1977/78	5,709	15.50	88,502	N/A
1978/79	5,340	16.38	87,450	N/A
1979/80	5,200	15.94	82,900	N/A
1980/81	4,400	17.50	77,000	38,000
1981/82	3,900	16.33	63,700	37,300
1982/83	3,800	20.24	76,900	33,000
1983/84	4,200	22.02	92,500	40,000
1984/85	3,500	19.00	66,500	25,554
1985/86	4,000	17.00	68,000	28,052
1986/87	4,750	19.14	90,900	39,753
1987/88	5,600	20.00	112,000	51,408
1988/89	6,000	16.00	96,000	30,000
1989/90 <u>1/</u>	6,500	18.00	117,000	49,500

1/ Preliminary

## FEATURE COMMODITY ARTICLES

### 1990 WINTER GRAIN PROSPECTS IN THE NORTHERN HEMISPHERE OUTSIDE THE UNITED STATES

Winter grains account for roughly one-third of world wheat and coarse grain output. This year, winter grain conditions to date in the Northern Hemisphere outside the United States are mixed. Prospects are generally favorable in the USSR, northern Europe, Bangladesh, and China. Unseasonably warm weather and good soil moisture in most Soviet winter grains areas, except in southern Ukraine, have allowed early field work and reports indicate that the crop is 3-6 weeks ahead of normal development. Near ideal conditions are indicated for northern Europe from the United Kingdom to Poland. Recent rains around the Mediterranean Sea have somewhat benefited moisture-deficient winter grains in Italy's Po Valley, the western Balkans, and parts of northwest Africa. In many of these areas, however, timely rains in the next few weeks will be critical. The southern areas of France, Spain, and Morocco, and most of Algeria, Greece, Turkey, Syria, and northern Mexico remain unfavorably dry. In South Asia, India has experienced generally favorable, albeit erratic, weather since planting, while Pakistan has experienced less than ideal conditions and input availabilities.

**Western Europe:** Generally favorable conditions throughout Europe, with mild temperatures and adequate rainfall, point to the potential for good to very good winter grains crops. The weather has been nearly ideal in many areas of northwestern Europe. However, fall plantings in Portugal and Spain were hindered by heavy rains and dry weather during the winter months may affect winter grains in Italy's Po Valley, southern France, and much of Greece. Northern Europe, including central/northern France, the United Kingdom, and West Germany all report generally favorable conditions. Producers have shifted away from barley and premium quality bread wheats to higher yielding wheat varieties and rapeseed.

- o **France:** Winter wheat sowings are up slightly (2 percent) from 1989/90 while barley sowings are expected to drop marginally. Subsoil moisture in the south is less than desirable, with temperatures during the winter months above normal. Planting of higher yielding varieties could boost yield potential.
- o **United Kingdom:** Winter wheat plantings are reported to be slightly below last year (3 percent), but the shift from milling to higher yielding feed varieties reportedly was extensive. Barley plantings may be down slightly. Overall, mild winter weather was favorable.
- o **West Germany:** Winter wheat plantings are estimated to be about 3 percent below last year's level, while winter barley plantings may be slightly above a year ago. Conditions during the winter were favorable for crop development, with good soil moisture and mild temperatures. Farmers planted many new higher yielding wheat varieties, boosting yield potential.
- o **Italy:** Prospects point to winter wheat area being down about 9 percent. Dry weather prevailed throughout most of the major northern growing areas during the winter. Recent rains (March 25-28) have greatly benefited winter grains in the Po Valley.



- o Spain/Portugal: Substantial declines in winter wheat area are expected in both Spain and Portugal. Severe rains and flooding during the late fall and early winter reduced sown area and in some cases washed away plantings. Following planting, weather conditions have been mild and subsoil moisture adequate.
- o Belgium/Luxembourg: EC price policies are causing shifts from barley to winter wheat and to higher yielding wheat varieties. Winter wheat area is up an estimated 5 percent, but barley area may be down more than 10 percent. Overall weather conditions have been favorable with mild temperatures and adequate rainfall.
- o Denmark: Winter wheat area continues to increase as a result of economic and government policy considerations. Total area has remained stable. To date, no winterkill has been reported and precipitation has been adequate. A shift to higher yielding varieties may boost yield potential.
- o Greece: Winter wheat area is expected to be below last year as EC policy continues to favor durum production for Greece. Barley area should remain virtually unchanged. Soil moisture conditions were adequate during planting, but prolonged dry conditions may have caused some damage in the producing area around Larisa.

EASTERN EUROPE: Winter grain conditions in Eastern Europe are quite mixed with the outlook less optimistic as one moves south. Under favorable planting weather, area was increased in most of the countries. Eastern Europe, as well as Western Europe, has experienced the warmest winter in 40 years. Low soil moisture levels in many of the countries, particularly in the Balkans, are tempering early crop prospects. Unfavorable soil moisture levels may be somewhat offset by the mild winter and likely lower-than-normal winterkill to date. Some losses and stress, however, may have occurred in Romania and Bulgaria due to sharp dips in temperatures in early December and early-January. Because of accelerated development due to the warm winter, winter grains are susceptible to spring frosts and pest infestations.

- o Poland: Winter grains were sown under generally good weather last fall. Triticale, which grows especially well in Poland's sandy soil, has become increasingly popular, and is compensating for any decreases in area planted to rye, still the most commonly grown grain. The Polish government policy since 1983 has led to reduced rye area, replacing it with higher yielding wheat, triticale, and barley. While winter grain crops reached record levels last year, the outlook for 1990 is questionable because of high farm-input costs and depressed prices for farm products.
- o Czechoslovakia: Winter grains were generally well developed and well stood at the onset of winter. The late sown fields germinated evenly and a significant proportion of the winter grains were top dressed. According to the Ministry of Agriculture, soil moisture at the time of sowing was better in the western part of the country than in the east where dryness hampered crop development.

- o German Democratic Republic: Fifty percent of the cultivated land in the GDR is planted to grain and 80 percent of all grains are winter sown. The 1990 growing season has thus far been similar to the previous year: a very mild winter promoted early plant development. Much of the 1990 winter grain crop was planted early and is very well developed. Moisture has been adequate through the winter and plant development is ahead of normal growth patterns, but a late frost could inflict substantial damage on the crop. Planted wheat and barley area continue to expand, whereas area planted to oats continues to fall. A slight decline in rye area is expected, as farmers may double the area sown to triticale in 1990.
- o Romania: The current situation for winter grains is mixed, with soil moisture levels below normal in parts of the country, particularly in the southeast; however, the use of fertilizer and plant protection chemicals is up. Despite a warmer-than-normal winter, some freeze damage and winterkill may have occurred due to cold snaps in early December and early January.
- o Yugoslavia: The outlook for 1990 is uncertain at this time. Planted area increased slightly over the previous year, and most of the seeding was done during the optimal period. However, very low temperatures without snow cover last November and early December could have caused some damage. Warm and dry weather led to advanced crop development and further depleted already low soil moisture reserves. While timely rains in mid-February and again in late-March helped raise soil moisture levels, rains will be crucial for crop development in coming weeks. Additionally, high prices restricted the use of high-quality seed and agricultural chemicals.

USSR: For the second consecutive year, most of the winter grain areas have experienced a milder-than-normal winter. Generally, sowing occurred on time with adequate soil moisture available for good fall establishment. Although milder temperatures often portend above average losses from pests and diseases, only isolated incidents have been reported to date. The final seeding progress report last fall indicated winter grains planted area might be down slightly from last year, but recent articles about area and reduced winterkill indicate effective area may be about the same as last year.

Temperatures throughout most of the winter grain areas have averaged 5-8 degrees Celsius above normal during the winter. These above-normal temperatures allowed the crop to break dormancy several weeks early. In fact, the Soviet press reported winter grains resumed growth in some of the more southern areas in late February and early March--approximately 4-6 weeks ahead of normal. One of the benefits of the mild winter has been the slow melting of snow and deep percolation of rainfall into the subsoil, thereby improving subsoil moisture reserves and allowing early spring field work. However, the topsoil is dry in several of the southern areas and timely rainfall will be needed to insure optimal spring growth.



The Soviet press has expressed concern over snow-smothering in parts of the Central, Northern, and Volga-Vyatka regions. These areas experienced deep (40-60 centimeters and more) snow cover with little freezing in the soil. Smothering can reduce the stand density and weaken the surviving plants, thereby making them more susceptible to disease or late spring frosts. In the Northwestern, Central, Central Chernozem, and Volga regions and in the southern Volga-Vyatka region, ice crusting was reported to be a problem in some of the fields. Ice crusting is usually brought about by several freeze-thaw cycles. Damage resulting from ice crusting often causes mechanical injury or oxygen deprivation.

As of late March, the damage to winter crops had been relatively isolated, resulting in below average winterkill and leaving good to excellent prospects for winter grains.

#### NORTHWEST AFRICA:

- o Morocco: Winter grain conditions began strongly, but have deteriorated. This has been particularly the case in the more barley-oriented south. Prospects for the winter wheat crop remain favorable, however. Area planted to barley is forecast to decline, as farmers reacted to the elimination of barley price supports by planting wheat.
- o Tunisia: Although soil moisture conditions were favorable at planting time, dry weather prevailed during the growing season. Conditions in the primary growing regions remain only fair for winter grain development. Wheat and barley area are expected to be at or above last year's levels, but still well below the long-term average.
- o Algeria: Extremely dry weather at planting and during much of the growing season to date is expected to keep winter grain yields below the long-term average. Inadequate financing and government policy changes have created economic uncertainties for farmers planting winter grains. Planted area for both wheat and barley is expected to be no greater than last year's low levels.

#### ASIA:

- o India: In the fall, planting conditions for winter grains were very dry across the northern half of India, encompassing the greatest part of the winter wheat belt. Wheat area is estimated to be down 2 percent from last year. Below-normal rains in October may have delayed wheat plantings in the rainfed areas. However, the majority of the crop is irrigated and water supplies have been adequate for crop development. Below normal temperature and periods of heavy rainfall have characterized the winter weather. Apparently, crop growth has not been impaired by the heavy rains, however, yields may be affected by a continuation of the rains in late March and April. As of late-March, the entire wheat belt was in grainfill, with the eastern portion near harvest. Normally, the harvest period begins in early April, necessitating drier and warmer weather to avoid delays and crop losses.

- o **Pakistan:** Autumn planting conditions were dry in northern Pakistan's wheat zone, owing to below normal rainfall and an early monsoon withdrawal. However, the current winter grain outlook is very favorable due to adequate irrigation supplies and substantial winter rainfall. Winter grain establishment was excellent, with little reported damage from heavy storms which passed through the region. Timely showers in the rainfed or barani zone of northern Punjab have also helped to boost the overall crop outlook. Cool temperatures and abundant precipitation have maintained ideal growing conditions, although drier and warmer weather is needed for harvest. Wheat area is expected to be up only 1 percent from last year.
- o **Bangladesh:** Autumn planting conditions were nearly perfect this year, with excellent post-monsoon soil moisture reserves aiding early crop establishment. Winter rainfall also played a key role in maintaining crop vigor prior to reproductive growth phases. The current crop outlook is very favorable, with little change in wheat area expected.
- o **China:** The outlook is favorable for winter grains. The Chinese government called on farmers to increase winter grain production in 1990 by expanding planted area, particularly through more multiple cropping and use of fallow land in the South. The 1990 winter grain area target was set at 30 million hectares, with wheat accounting for over 90 percent of the total. Winter wheat area is expected to be up 2 percent, and officials are calling for an increase in winter barley area by 2.5 percent. The 1990 winter grain crop got off to a good start. There was adequate moisture during the fall planting season, and although the winter was drier than normal, precipitation amounts were greater than in 1988, especially in Hebei province and along the north bank of the Yangtze River. The crop entered dormancy in good condition and winterkill was probably insignificant. Since January, above-normal snow and rainfall has fallen over almost all winter grain areas. Soil moisture levels currently range from adequate in the northern grain areas to surplus in the South, and mild temperatures have encouraged early emergence and vegetative growth. Prospects appear as good as last year when China had a record wheat crop.

#### **MIDDLE EAST:**

- o **Israel:** Northern Israel has had favorable weather for winter grains, although southern Israel, where two-thirds of the wheat is grown, has experienced deficient precipitation. Wheat area is expected to remain the same as last year while barley area is expected to increase slightly.
- o **Jordan:** Following last year's drought, rainfall in Jordan during the fall of 1989 and early 1990 has been average. Last fall, most farmers delayed planting until mid-December due to late and spotty rains. The production outlook is for a rebound from last year's low level.



- o **Saudi Arabia:** Wheat production has leveled off in recent years and is expected to decline this season. Although the Government is encouraging barley production, the guaranteed producer price for barley is half that of wheat and barley yields are lower than wheat yields. Therefore, only a small shift in area to barley is expected.
- o **Syria:** Fall 1989 planting rains were early but below average in northeast Syria. Winter rains continued below average but were well spaced and winter grains are likely in much better condition now than at this time for last year's poor crop. More precipitation has fallen this year in southeast Turkey, thereby boosting irrigation water supplies for northern Syria.
- o **Turkey:** The outlook for winter grains is unfavorable. The season thus far resembles last year's drought-affected harvest. Although some parts of the major grain-producing areas have had normal weather, winter precipitation generally has been below normal. Increases in area can be expected because of good fall planting weather and very attractive domestic prices. Barley, a major ingredient for feed, can expect a slight increase in total area as the feed industry develops and prices continue to rise.

#### **NORTH AMERICA:**

- o **Canada:** Winter wheat plantings are down 2 percent from last year's level. Larger wheat plantings were reported in Eastern Canada while sections of Manitoba, Saskatchewan, and Alberta report lower acreage planted and inadequate subsoil moisture. Spring rains once again will be crucial for yields.
- o **Mexico:** Low reservoir levels in the central growing region have prevented gravity-fed irrigation of the bajio winter grain crop. The primary growing states of Sonora and Sinaloa were dry during the summer and fall of 1989. Winter rains, however, for the season were near normal, but much of the rain came in December. Unusually cold December and early January temperatures may have damaged some wheat in eastern areas. Winter wheat area is estimated to be below last year's level due to farmer uncertainty over the producer price.

Note: The initial forecast of wheat and coarse grain area, yield, and production for the 1990/91 year will appear in the May edition of the World Agricultural Production report.

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## WORLD PINEAPPLE PRODUCTION

World pineapple production during 1990 is forecast at 5,363,700 tons, down 2 percent from the record 5,459,235 tons harvested a year ago. Most of the decline can be attributed to a substantially lower crop estimate for Thailand, where excessively dry conditions have sharply reduced yields, slowed ripening, and compromised fruit sizes.

Three successive years of unfavorable weather conditions have adversely affected pineapple production in the Philippines. Annual production has slumped from a high of 1.67 million tons in 1987 to an estimated 1.61 million tons in 1990. The culpable weather phenomenon this year is a persistent dry spell. Rainfall in the major producing areas of Mindanao has averaged 30 to 75 percent below normal. The drought has reduced yields and greatly slowed the rate of fruit development, thereby prolonging the maturation period of both the plant and ratoon crops. Harvesting is also expected to be slower and more difficult. The excessive dryness of the pineapple peduncles will necessitate manual twisting during harvesting, and heavy bruising is likely. Lack of adequate soil moisture is expected to reduce total area planted during the 1990 season--the probable result being smaller crops in 1991 and 1992.

Pineapple production in the Cote d'Ivoire has declined steadily since 1985. The 1990 crop is forecast at 198,000 tons, marginally below the 1989 volume. The Government's liberalization of the cooperative system in 1985 appears to have precipitated the downslide. At that time, the sole pineapple cooperative, COFRUITEL, was dissolved and growers were allowed to join any of the newly established cooperatives. More importantly, growers were also given the option of changing cooperative groups at any time--a factor that had a highly destabilizing effect upon the industry. Heretofore, it had been COFRUITEL that extended growers credit for inputs. However, under the present system, most cooperatives have been reluctant to extend credit for fear that members will opt to change groups prior to satisfying all outstanding debts to the cooperative. In an effort to rectify this problem, several cooperatives have recently entered into agreements with European importers who are willing to provide financing for input purchases in exchange for a guaranteed supply of product. This option partially resolves one critical problem facing the industry but, of course, only for members of the participating cooperatives. There remain numerous other factors that are slowly eroding the foundation of Cote d'Ivoire's pineapple industry: declining area--both planted and harvested; low yields caused by limited use of and lack of technical expertise in the application of fertilizers, pesticides, and herbicides; the inability of small-scale farmers to conform to quality standards; reduced demand for raw product due to cutbacks in local processing activity; and declining world market prices for fresh pineapple. Although the Government has empowered the Societe Pour le Development de la Production de Fruits et de Legumes en Cote d'Ivoire (SODEFEL) to deal with several of these problems, no turnaround in the industry is expected in the near future.

Kenya's 1990 fresh pineapple crop is currently forecast at 212,000 tons, only marginally below the 1989 volume. A 6-percent reduction in harvested area is expected, most of which will lie fallow through one planting cycle in accordance with standard rotational procedures. Mitigating the effect of this cutback in area is the fact that, this year, more than one-half of total output will be harvested from the high-yielding plant crop. On average, well-managed farms, in Kenya, can expect plant crops to yield 60 to 65 tons per hectare vis-a-vis 50 tons per hectare for the ratoon crop.



Preliminary assessments indicate there will be a moderate turnaround in pineapple production in the United States this season. The 1990 crop is tentatively projected at 553,400 tons, up 5 percent from 1989. A substantial recovery in yields had originally been forecast, but cool, rainy weather since the beginning of the year may temper the crop's yield potential. A slight reduction in total planted area is currently forecast based on a recent announcement that at least one Hawaiian pineapple company will be cutting back acreage in 1990. The magnitude of the reduction is not known at this time.

No growth is expected in Mexico's fresh pineapple industry during the 1990 season, with harvested area and production forecast to remain static at 7,200 hectares and 324,000 tons, respectively. Because weather conditions have been generally favorable throughout the season, yields are expected to remain relatively stable at an average of 45 tons per hectare with quality very good in terms of size, weight, appearance, and brix content. Farmers, responding to the oversupply and price fluctuation problems of 1989, have already cut back on planted area and begun to diversify into other crops. As the following table illustrates, a sharp rise in projected input costs for 1990 may render pineapple cultivation unprofitable for many growers:

TABLE 12

Pineapple Production Costs in Mexico 1/

	1989 <u>2/</u>	1990 <u>3/</u> <u>4/</u>
Field Preparation	195	223
Planting	441	556
Fertilization	700	940
Weeding	136	146
Insect/Disease Control	504	644
Forced Blooming	119	132
Fruit Covering/Shading	72	80
Harvesting	178	205
Total	2,345	2,926

1/ Average Costs in U.S. Dollars (Density = 30,000 plants/hectare).

2/ Converted using March 1989 controlled exchange rate of 2,357 pesos/U.S. dollar.

3/ Converted using March 1990 controlled exchange rate of 2,735 pesos/U.S. dollar.

4/ Preliminary

Because many growers have been unable to repay loans acquired to cover operating costs, the Government has recently reduced the availability of credit. A large number of growers financed by the Rural Development Bank, BANRURAL, are communal farmers and currently lack the economic resources to guarantee repayment. With average production costs projected to rise to US\$3,957 per hectare by the end of 1990, further reductions in both planted area and output are anticipated through 1992.

After declining for 2 consecutive years, pineapple production in South Africa is expected to rebound in 1990 to 265,000 tons. Although the 2-year recession--from 1988 through 1989--curtailed total output, the industry managed to maintain the production base. Normal rotation schedules and planting rates were adhered to during the downturn and, toward the end of 1989, a slight increase in total planted area was reported.

Pineapple production in Taiwan has been expanding since 1983. The 1990 crop is expected to reach a 10-year high of 235,000 tons due to favorable growing conditions, an increase in harvested area, record yields, and strong grower prices. The resurgence of the industry coincides with Taiwan's development of a new pineapple variety, Tainoun No. 4. Unsuitable for canning, this variety quickly gained acceptance as a top-quality fruit for fresh consumption, both locally and in Japan. With the canning industry waning, the success of Tainoun No. 4 provided the opportunity to redirect the industry's production focus away from canning and toward fresh market sales. Thus far, production of Tainoun No. 4 has proven very lucrative for growers. In 1989, it was Taiwan's third most profitable horticultural crop, following gladioli and winter chrysanthemums, with an average return of approximately US\$10,800 per hectare--the highest for any domestically grown fruit. Because of its importance to the industry, the Government tried to prevent cultivation of this variety outside of Taiwan. Despite various precautions, including the removal of all crown buds prior to exportation, the Tainoun No. 4 variety is now being grown in Thailand, Malaysia and the Ryukyu Islands. Given the likelihood that Taiwan's canning operations will eventually cease and Taiwan will lose most of its Japanese market share for Tainoun No. 4 to low-cost producers throughout Southeast Asia, the long-term outlook is for a gradual reduction in total fresh output to a level sufficient to satisfy domestic demand.

Pineapple production in Malaysia is expected to increase for the fourth consecutive year. The 1990 crop is forecast at 211,300 tons, up 2 percent from a year ago, due to excellent growing conditions and a modest increase in harvested area. Recent changes in cultivation practices have boosted both quality and yields. Estates and many of the smallholders now replant from crowns, slips, or suckers after each harvest instead of regrowing from the ratoons. Using this planting method, estates and smallholders producing only pineapple are averaging about 30 tons of fruit per hectare annually. In contrast, smallholders who intercrop pineapple with tree crops generally obtain yields of only 5 to 20 tons per hectare. The Government actively encourages improvements in quality and productivity, particularly with respect to smallholder operations. However, there is no ongoing push for further expansion of the industry above current levels.

Pineapple production in Australia for 1990 is currently forecast at 155,000 tons, 6 percent greater than the weather-damaged harvest of 1989. Assuming normal weather patterns through the remainder of the season, harvested area is expected to expand to 4,000 hectares, resulting in a moderate increase in yields.



TABLE 13

## FRESH PINEAPPLE: AREA &amp; PRODUCTION IN SELECTED COUNTRIES

	AREA PLANTED (Hectares)			AREA HARVESTED (Hectares)			TOTAL PRODUCTION (Metric Tons)		
	1988	1989	1990 1/	1988	1989	1990 1/	1988	1989	1990 1/
AUSTRALIA	5,618	4,935	5,333	4,300	3,800	4,000	168,300	146,000	155,000
COTE D'IVOIRE	14,400	13,900	13,500	4,800	4,200	3,900	216,441	199,740	198,000
KENYA	5,830	5,830	5,830	3,500	4,480	4,220	191,300	212,330	212,000
MALAYSIA	11,800	11,200	11,700	8,350	7,800	8,100	194,528	206,430	211,300
MEXICO	8,500	8,300	8,000	5,500	7,200	7,200	247,500	324,000	324,000
PHILIPPINES	61,000	62,000	61,500	38,000	37,600	37,800	1,640,000	1,620,000	1,610,000
SOUTH AFRICA	31,700	31,750	31,750	N/A	N/A	N/A	264,800	262,200	265,000
TAIWAN	7,580	7,301	7,400	6,221	5,992	6,080	228,127	230,365	235,000
THAILAND	92,000	95,000	95,000	69,000	71,250	72,000	1,690,500	1,732,000	1,600,000
UNITED STATES	14,000	13,235	12,950	N/A	N/A	N/A	597,835	526,170	553,400
TOTAL	252,428	253,451	252,963	N/A	N/A	N/A	5,439,331	5,459,235	5,363,700

1/ FORECAST

APRIL 1990

PRODUCTION ESTIMATES AND CROP ASSESSMENT DIVISION, FAS, USDA

TABLE 14

**FRESH PINEAPPLE: PRODUCTION IN SELECTED COUNTRIES**  
(METRIC TONS)

Year	Australia	Cote d'Ivoire	Kenya	Malaysia	Mexico	Philippines	South Africa	Taiwan	Thailand	United States	Total
1970.....	128,021	110,579		283,246	248,800	365,000	160,539	338,191	242,489	865,455	2,742,320
1971.....	128,000	135,746		268,190	297,300	380,000	173,506	358,529	124,826	854,570	2,720,667
1972.....	126,000	201,304		255,391	218,200	375,000	173,994	334,384	318,789	859,105	2,862,167
1973.....	126,000	201,010		241,538	268,300	333,235	147,389	327,982	483,493	734,820	2,863,767
1974.....	119,761	229,000		245,339	397,800	405,000	184,226	307,851	803,720	635,030	3,327,727
1975.....	95,451	240,000		199,292	371,300	400,000	169,374	318,978	1,151,865	653,175	3,599,435
1976.....	119,000	267,000		194,418	442,000	752,000	172,317	278,830	1,295,850	616,885	4,138,300
1977.....	101,000	242,000		191,844	510,000	780,000	158,825	282,193	1,499,400	625,960	4,391,222
1978.....	103,000	312,000		190,344	568,300	815,000	167,300	249,627	1,540,000	612,350	4,557,921
1979.....	133,000	287,000		192,646	632,100	875,000	212,119	244,777	1,372,000	617,795	4,566,437
1980.....	123,265	303,000		176,123	604,600	901,000	221,879	228,804	1,673,000	596,020	4,827,691
1981.....	123,350	306,702		153,631	550,000	1,242,133	242,710	181,039	1,824,080	576,970	5,200,615
1982.....	125,528	233,396		188,331	440,000	1,682,889	244,059	144,900	1,439,250	607,815	5,106,168
1983.....	111,280	181,474		183,400	250,000	1,718,730	209,600	115,194	1,465,750	654,990	4,890,418
1984.....	115,100	227,564	168,000	174,538	260,000	1,448,622	184,263	123,609	1,472,496	544,310	4,718,502
1985.....	124,500	294,764	167,000	182,420	325,000	1,601,922	247,600	149,745	1,768,944	512,560	5,374,455
1986.....	155,000	280,487	231,298	174,058	292,500	1,635,000	247,900	157,941	1,635,723	586,040	5,395,947
1987.....	165,000	269,096	210,000	178,473	306,000	1,670,000	267,400	193,337	1,509,965	627,770	5,397,041
1988.....	168,300	216,441	191,300	194,528	247,500	1,640,000	264,800	228,127	1,690,500	597,835	5,439,331
1989.....	146,000	199,740	212,330	206,430	324,000	1,620,000	262,200	230,365	1,732,000	526,170	5,459,235
1990 1/.....	155,000	198,000	212,000	211,300	324,000	1,610,000	265,000	235,000	1,600,000	553,400	5,363,700

1/ Preliminary.



## COMMERCIAL BEEF PRODUCTION STARTING IN THAILAND

Stimulated by rapidly increasing demand, Thailand is in the early stages of developing a commercial beef production industry. Growing demand for beef, especially high quality beef, is likely to keep prices strong, but other problems such as management and disease are likely to severely limit the pace of development. At the present time, at least 95 percent of the beef supply comes from cattle raised in the traditional manner.

Until the mid-1980's, beef production in Thailand was largely a by-product of the use of cattle for draft animals. With a fairly stable need for draft animals there was little growth in the livestock herd, which fluctuated between 4 and 4.5 million head from 1970 through 1985. Under the traditional system, most of the cattle belong to small family farmers and are used for draft purposes until culled. Once culled the cattle are sold to dealers or regional slaughter houses. Under the traditional system, most herds are less than five animals composed of Native or Native-Brahman crosses. The herds are typically grazed on open communal pastures with supplemental feeding of rice straw as needed. There is very little supplemental feeding of concentrates.

With the growing mechanization of Thai farms, there has been a reduced need for draft animals. Also, higher incomes and growing tourist and fast food industries have given Thailand the opportunity to develop a commercial beef industry. Thus during the past few years commercial fattening operations have developed in the the major feed growing provinces. The number of cattle involved is thought to be only about 20,000 head or 2 percent of the annual slaughter. Current policy calls for that total to increase to 50,000 head by 1992, which the government feels will meet demand for high quality beef at that time. Other active policies that encourage beef development include research on improved beef breeding, feeding, and management and providing small farmers with extension and artificial insemination services. The government also supports imports of high-grade breeding stock for distribution to breeding farms. The domestic meat market is protected by a 70-percent tariff on imports of high-quality beef.

Cost and return data from a small sample of fattening operations show good potential for profitable production. According to this survey, production costs ranged from the equivalent of US\$348 to \$412 per head. Those costs coupled with market prices of 50 to 56 baht (\$1.94 to \$2.17) per kilogram of carcass weight gave gross profit margins of \$168 to \$199 per head. Overall beef prices have trended upward during the past 3 years with the increases in demand. Demand for high quality beef is said to be growing much faster than overall demand. Thus continued expansion in the fattening sector is likely to continue.

TABLE 15

Thailand's Beef Industry  
(1,000 head)

	1988	1989 1/
Jan. Inventory	4,340	4,500
Calf crop	780	810
Live Imports 2/	450	480
Live exports	2	1
Slaughter	1,068	1,129
Meat production (1,000 tons)	128	135
Dec. inventory	4,500	4,660

1/ Preliminary.

2/ Mostly unregistered imports from Burma.

In developing a commercial beef production industry, Thailand faces a range of management, disease, and marketing problems. Management problems center on education and the need to convince small farmers that cattle can efficiently utilize feed resources already available. These include 5 million tons of corn, 20 million tons of tapioca, byproducts from 20 million tons of rice, and byproducts from the sugar and pineapple processing industries. In addition there are plenty of opportunities to improve pastures and other forages, and to grow corn silage. Thailand has 3 major diseases that affect cattle significantly, foot-and-mouth, brucellosis, and hemorrhagic septicemia.

Foot-and-mouth is considered the most serious because it prevents exports of unprocessed beef to nearby markets. The disease problem is complicated by largely illegal cattle imports from Burma which tend to preclude complete eradication of these diseases. Cattle marketing problems include inefficient assembly method, and a substantial number of older, largely unsanitary slaughter houses.

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## GERMAN UNIFICATION AND AGRICULTURE 1/

With discussions of German unification underway, it is of particular interest to briefly review the basic differences presently found between the agricultural sectors of the two countries, the changes to be expected, and the possible effect of unification on agriculture in the Federal Republic of Germany (FRG). Agriculture in the German Democratic Republic (GDR) is almost fully socialized and dominated by large farms. This form of organization is in sharp contrast to the small family farms prevailing in the FRG. In the GDR, 86.4 percent of the agricultural land is farmed by 3,855 agricultural production cooperatives (LPGs), while 465 government-owned farms (VEGs) manage an additional 7.3 percent of the agricultural area. Only 5.4 percent of the total agricultural land is in private hands.

After unification, it would be highly unlikely that the large GDR agricultural production units would disperse into a large number of small units. LPGs may divide into units which are somewhat easier to manage though still sufficiently large to make full use of economies of scale. Furthermore, animal production, which is highly concentrated and similarly segregated from crop farming, could be reintegrated into sizable but more manageable mixed farms. These units would provide management advantages through coordinated feed production and waste management. Farm sizes in the range of 500 to 1,500 hectares appear feasible, depending on soil quality, existing capital improvements, and the quality of the present management. These new units might be organized into true cooperatives. Incorporation would be possible, with farm workers and managers holding shares and receiving a share of the enterprises' profit. A revised system would better combine private land ownership with the advantages of sufficiently large farm units to utilize all advantages of scale and modern commercial management. It is expected that only a few farmers might reclaim land held before the formation of LPGs and restart fully private farms. However, re-establishment of privately operated horticultural units located close to cities would be likely.

It is impossible to forecast the extent to which the small family farm philosophy and protectionist agricultural policy presently prevailing in the FRG would change to integrate the two grossly differing farming systems. Undoubtedly the FRG Ministry of Agriculture and the Farmers Union are in a dilemma regarding future basic policies. Much FRG farm legislation provides clear privileges for small farms and negatively affects larger commercial entities. Whether or not this legislation would also be applied to farming in the GDR remains to be seen.

Price adjustments on the way to a more market-oriented system may be dramatic and high producer prices and subsidized consumer prices in the GDR could change quickly. Many of the central planning provisions previously applicable to GDR agriculture have already been dropped. The 1990/91 crop year will be the first year managers can plan production in accordance with existing economic conditions rather than mandatory plans. However, the first noticeable improvement in output probably cannot be expected before the 1991 harvest. Economic unification and introduction of the West German mark in the coming months probably will not have a significant effect on productivity or output of GDR agriculture in the 1990/91 crop year.



Labor productivity in the GDR agricultural sector is low compared to the FRG and considerable pent-up demand exists for precision machinery including planting, fertilizer, and pesticide equipment. Though the equipment is available in the West, it must be paid for in hard currency.

The transition, though expected to occur rapidly, would probably require some official conversion period. However, it is likely the EC market order system, with all its consequences, would eventually be applied in the present GDR area. FRG Minister of Agriculture Kiechle has stated that a 5-year transition period will probably be required. Adjustments to some EC provisions may have to be made quickly for additional milk quotas, reference quantities, and other items. Although most of the import/export limitations vis-a-vis the GDR have already been eliminated for non-agricultural products, quotas regulating trade in agricultural products are still strictly enforced. Complete liberalization of intra-German trade would be expected to come only in stages.

Table 16

FRG - GDR Selected Comparative Data, 1988

Item	Unit	FRG	GDR
Population	Million	61.5	16.7
Agricultural area/capita	Hectare	0.19	0.37
Agric. farms/ha or more	Number	667,215	4,621
Agricultural area	Mil. Ha.	11.9	6.2
of which arable land	Percent	60.9	75.8
Average farm size	Hectares	17.8	134
Fertilizer use: N	Kg/Ha	121.0	141.3
P205	Kg/Ha	56.8	56.4
K20	Kg/Ha	72.1	94.4
Yields 2/ winter wheat	100 Kg/Ha	61.1	52.1
winter barley	"	53.4	48.8
all grains	"	52.3	44.0
potatoes	"	333.6	233.6
sugar beet	"	490.4	302.3
milk/cow	Kg	4,713	3821
eggs/hen	No.	257	220

1/ This article and statistics were excerpted from the 1990 Annual Agricultural Situation Report prepared by the U.S. Agricultural Counselor in Bonn, West Germany.

2/ All yield data are 5-year averages based on the 1983-88 period.  
Source: Ministry of Agriculture, FRG



The new Collor Government announced on March 16, during a bank holiday, a number of provisional economic measures intended to normalize Brazil's economic situation. Of these measures, the partial blocking of financial assets in the nation's banking system is having an immediate impact upon agriculture as well as other commercial sectors. In effect, the blocked assets, accomplished by a compulsory loan to the Government, is a major reduction in national liquidity. Under the plan, owners of blocked assets will not be allowed access to their funds for 18 months, upon which withdrawals can then be made over the next 12 months. The Government will pay 6-percent interest plus an adjustment for inflation during the loan period. According to some Brazilian analysts, the national liquidity has effectively been reduced by an estimated 80 percent.

In addition, the Government announced the creation of a new currency, the "Cruzeiro", to replace the New Cruzado which was introduced in February 1989. The Cruzeiro's exchange rate is to be determined by the market as opposed to the constant adjustment of the New Cruzado by the Government. Both the New Cruzado and the Cruzeiro will be in use until the available supply of Cruzeiros is complete.

The new measures have placed both agricultural producers and traders in uncomfortable positions. This year's weather conditions and rainfall delayed the harvest schedule, resulting in an unusually large share of the current field crops yet to be harvested. The availability of producer financing has been tight from the beginning of the season, and the current reduction in the nation's liquidity has shrunk access to producer operating credit even further. To the extent that producers have available stocks of fuel and cash, have arranged for credit before March 16, and are able to use their creative talents of barter with output for goods and services, the harvest will continue.

Delayed harvest will be least important for corn. Soybeans, however, are susceptible to shattering if moisture levels decline too far. The situation for cotton is critical. Cotton quality is extremely vulnerable to late-season rains during harvest and a substantial share of the crop is hand-harvested. Producers short of cash will be unable to hire field labor. The impact on the livestock sector varies from one extreme to the other. Poultry producers are scrambling to maintain feed supplies which are threatened by their liquidity crisis. Any feed shortage of a short duration will disrupt normal production cycles, reducing short-term profitability and the availability of poultry for months to come. The cattle industry, however, is generally independent from input purchases and is therefore relatively insulated from the present liquidity problem.

Assuming producers can overcome the lack of available credit for crop harvest, they face weak sales prospects due to the Government's economic measures. Traders had expected the Government to substantially devalue the New Cruzado in relation to the dollar in order to make exports more competitive. Some traders advocated a 60-percent devaluation, taking into account domestic transportation costs, in order to compete in the international market. Initially, the new market-determined Cruzeiro strengthened against the dollar due to the nation's liquidity squeeze. While the Cruzeiro is expected to weaken later, export sales prospects this marketing year are reduced.



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Should the Cruzeiro-dollar exchange rate continue to preclude export potential, producers will be faced with a market based upon domestic demand, which in the case of soybeans is less than half of the current expected harvest. Producers face other problems as well. National storage capacity can accommodate only 40 percent of the estimated grain and oilseeds output, placing producers under severe pressure to sell at the minimum Government support price. Support prices for most commodities do not cover production costs, and prices much below current international levels would not allow producers to meet their loan obligations, mostly to the Government.

The Collor administration has indicated it intends to institute a number of other economic measures in the future, including a food supply policy, new agricultural credit policies, and new minimum prices. The extent to which the present and any future economic measures are permanently instituted will be determined by Congressional approval, which is necessary for continuation beyond 30 days.

There may be some hope for Brazil's agricultural producers in the near future. Four newly created policy groups within the Economics Ministry, one specifically to address the pressing agricultural situation, began analyzing policy alternatives in early April.

1/ This article is based on recent reports received from the U.S. Agricultural Counselor in Brasilia.

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